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form givers

1959

FORM GIVERS
AT MID-CENTURY

> *". . . and we will succeed in creating the first modern, technological, humane, prosperous and reverent civilization. This creative response to challenge will be most vividly expressed in and by architecture."*
>
> HENRY R. LUCE
> Address to the American Institute of Architects
> at its Centennial Celebration

THE CORCORAN GALLERY OF ART
Washington, D.C.

THE METROPOLITAN MUSEUM OF ART
New York

MUSEUM OF FINE ARTS
Boston

CARNEGIE INSTITUTE
Pittsburgh

THE MINNEAPOLIS INSTITUTE OF ARTS
Minneapolis

VIRGINIA MUSEUM OF FINE ARTS
Richmond

Organized and Sponsored
by
TIME, *The Weekly Newsmagazine*
for
THE AMERICAN FEDERATION OF ARTS

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TABLE OF CONTENTS

Acknowledgments 2
Foreword, James A. Linen 5
Introduction, Pietro Belluschi 6
The Form Givers, Cranston Jones 9
Frank Lloyd Wright 12
Ludwig Mies van der Rohe 18
Le Corbusier 22
Walter Gropius 26
Richard J. Neutra 30
Alvar Aalto 34
Marcel Breuer 36
Wallace K. Harrison 40
Philip C. Johnson 44
Skidmore, Owings & Merrill 48
Eero Saarinen 52
Edward D. Stone 56
R. Buckminster Fuller 60
Photograph Credits 64

EXHIBITION

Organized by Cranston Jones, Associate Editor, TIME

Designed by Gyorgy Kepes,
Professor of Visual Design, Massachusetts Institute of Technology

Produced and Circulated by The American Federation of Arts

The American Federation of Arts, with headquarters at 1083 Fifth Avenue, New York City, is a national, non-profit, educational organization, founded 1909 in Washington, D.C. and incorporated 1916 in the State of New York. It is composed of chapter, individual, and corporate members. The purpose of the Federation is to cultivate the appreciation and foster the production of art in America. This is carried out through a program of activities including traveling exhibitions, publications, national and regional conferences and consultation services.

1909 1959

FOREWORD

It is perhaps typical of the energy and imagination of The American Federation of Arts that it took pains to make clear to us how an important exhibition might grow out of TIME's continuing coverage of architecture and specifically our cover story of July 2, 1956.

This story was the one on Architect Eero Saarinen and the 20th Century Form Givers, which the American Institute of Architects had already honored with its journalism award in 1957. A F A saw that if it could be projected into exhibit form, it could underscore America's original contribution to world architectural history.

Here in "Form Givers at Mid-Century" we see contemporary evidence of the classic marriage between art and engineering which, in centuries past, has inevitably produced great building.

"Form Givers" marks the 50th year of A F A's farsighted program of traveling shows. The total contribution of these exhibitions to our national culture is impossible to calculate. All that appears on the record (*i.e.,* the rocketing figures of museum attendance, art collecting and enrollment in art courses) indicates that, because of such efforts, it may be said that the American people are coming more and more to a popular understanding and appreciation of the arts.

With pride of association, TIME salutes The American Federation of Arts on its 50th anniversary. We look forward to continuing a long and happy relationship in our mutual pursuit of enlightenment and taste.

James A. Linen

Publisher
TIME, *The Weekly Newsmagazine*

INTRODUCTION

This architectural exhibit is more than a proclamation of excellence; it presents the work of men who have been in large measure responsible for the New Architecture of our age. The full meaning and importance of their ideas are just now beginning to be widely understood. In looking at the photographs and models of their work, one is struck by the great variety of these ideas, which reveal the many and, at times, contradictory aspects of a vital esthetic growth.

The intellectual theories which have served as springboards of creative action in this century can be observed here in their formal expressions; among them, forms born of the neo-humanistic philosophies in their many romantic variations, crisp and naked structures built on rational-functionalist beliefs, and those erected in the faith that our technological era needs poetic transfiguration. Rather than assess creativity by narrow labels, it may be proper and more important to say that these men all have in common a deep commitment to express the reality of our time. Their forms are less the obvious signs of renewal than the efforts to express the symbols of our contemporary life, which is demanding in its awareness and is of infinite richness and variety.

These gifted men have searched for truth and have given it form. But truth is enormously complex and elusive; it is more than function or structure or emotional fulfillment. It is all of them, plus the imaginative spark of artistic conception. Architecture is many things, but above all it is an Art, and only as such will it produce significant forms. Modern forms are born through the experience of our own time—a fleeting moment in human history, a coming together, so to speak, of certain elements to form a crystal.

From the very dawn of civilization the search for symbolic expression has been an instinctive and universal urge of mankind; thus Architecture has expressed the circumstances of its culture and the social events of its time, a true mirror of human evolution. Our own century has witnessed deeper changes than in any previous age. The search for meaningful forms has been in a context of swift scientific advances, of wars and social upheavals. Thus we have needed greater understanding and perhaps greater courage.

It has been a very difficult task to restore that subtle relationship between form and matter which the spirit of poetry requires; architecture, like poetry, continually needs fresh new language to express itself. Thus the creative struggle never comes to an end, because the human mind is nourished not only by what it sees but more so by what it understands; and as understanding grows, so does the scope of its creative powers.

Perhaps this response of architecture to life is the great unifying attitude of these men as well as of all creative men in all the Arts. It is an attitude which automatically excludes the inferior, the cheap and the bizarre, while it exalts the subtle, the significant and the appropriate. We may even believe that only by such a philosophy will order emerge from the chaos of our urban complexes, that esthetic guidance may be given to our technological efforts, and salvation wrought from the dangers of our materialistic age.

It must be clear then that the mere invention of forms is not the whole of architecture; even as an art it must satisfy many restrictive conditions. Above all, it must submit to an underlying discipline of logic and order; arbitrary or merely fashionable forms would only add to the visual chaos which already tends to engulf us everywhere. We find that in nature itself what is created can be of infinite variety and still obey certain universal laws of life as well as more limited laws dictated by climate, function and adaptability; chaos does not exist in nature, only in the man-made world.

The truly creative man then, the great Form Giver, searches instinctively for this sense of logic and order and even restraint (not to be confused with the concern for the merely practical or the commonsensical), which is a condition of "Beauty" in all the Arts. Many believe that the artist alone possesses the intuitive feeling for this condition and the self-discipline to submit to it. But in our age, artists have had a hard time. They too have been separated from the roots of life. Also there are too few of them; and more importantly, there is no way to bestow the laurel wreath nor to prevent the mediocre man from assuming the role of Form Giver.

Therefore, while this exhibition emphasizes the enormous contribution of these artists as Form Givers, it would be wise to be aware of the dangers of the purely formalistic approach to architecture. The profession is not always as alert as it should be to the fact that life never stands still, that its very freedom brings constantly new elements to the framework of our intellectual theories, and that only the understanding of life will keep architecture rich and vital and able to express what has validity in relation to time, mood and function.

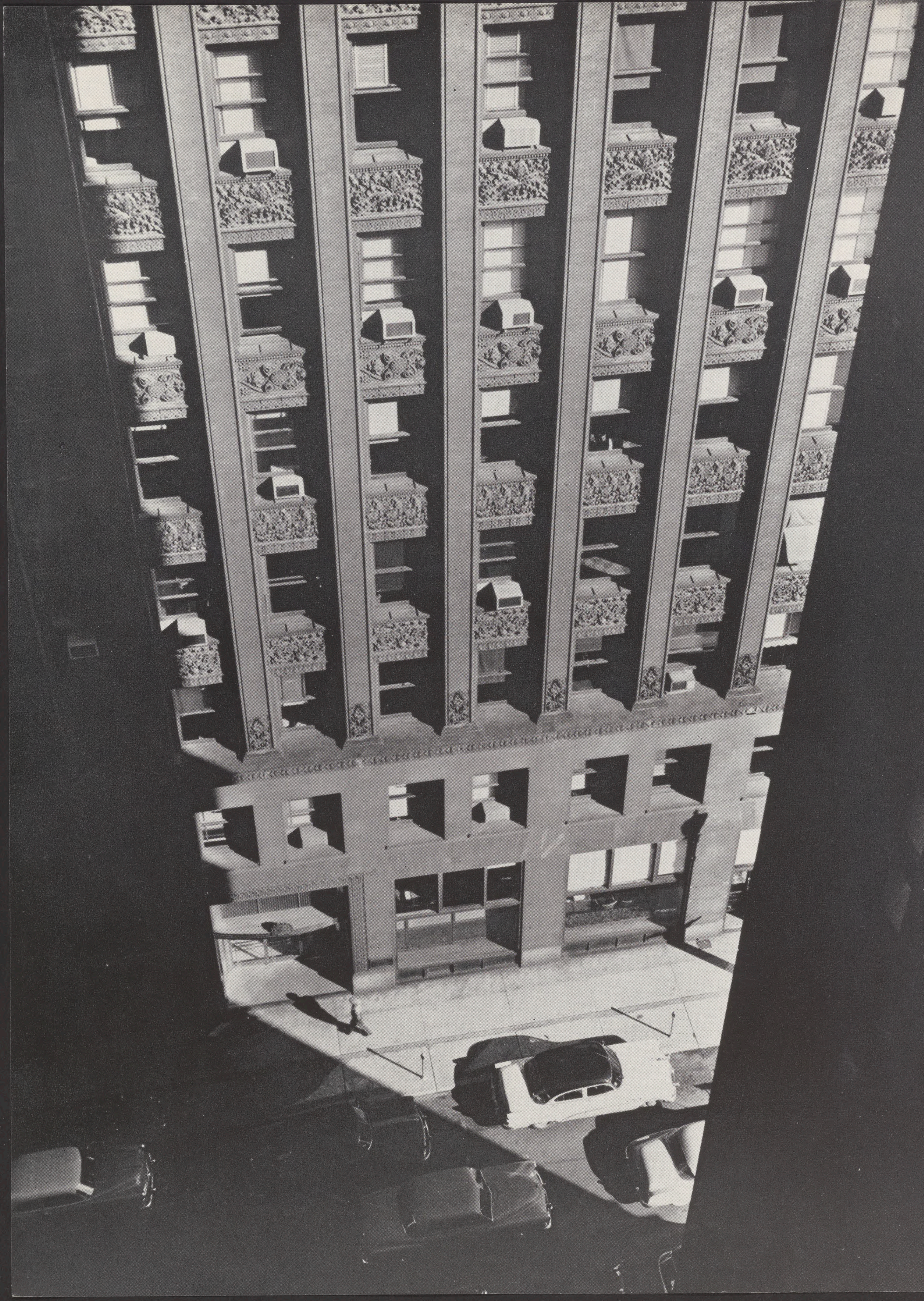
Some critics may not accept as definitive this list of architects as "Form Givers," which was prepared by TIME for The American Federation of Arts, and it is true that some great foreign names have not been included nor have the names of many younger men. But no one will deny that the list contains the names of the great originators, the philosophers of the revolution, as well as the names of younger men who consolidated the gains and brought widespread public recognition and acceptance of the New Forms.

If this group is predominantly American, it is because the opportunity for architectural advancement has been greater in America than in other countries because of our greater industrial expansion and the freedom and vitality of our institutions. Yet we may be reminded that about half of these men are not American born. It is also fair to say that there were other great men before, who prepared the ground for the enactment of this century's architectural drama.

Architecture is a complex of Art and Science. To flower in our modern climate, it needs many minds and many talents working together. In our day, the artist-architect is learning to accept technology as a great liberating tool to enhance and enrich rather than to demean man's way of life; he recognizes the importance of Man as a measure and inspiration for his Form Giving. He realizes that even as our society is undergoing enormous changes, particularly in the enlarged scale of space and time within which mankind must operate, he never forgets that the individual remains physiologically unchanged, that his basic emotions cannot be denied, that love of color and texture and play of light have a real meaning to him, and that merely intellectual rationalizations will not satisfy him for long. We may feel that ornament and richness of space may again return as a part of man's long heritage. The architect is in effect the humanizer of society, the artist with the will to make the earth a fitting place on which to live.

Pietro Belluschi

Dean, School of Architecture and Planning
Massachusetts Institute of Technology



WAIN

THE FORM GIVERS by Cranston Jones

This exhibition invites attention to outstanding buildings by 13 architects. Each building is a high achievement in the work of an architect whose exploration of form has made a significant contribution to modern architecture. In almost every case the buildings have been designed or completed in the last two years. Several are also new in the sense that they fulfill requirements unique in this technological age; others, in precisely the manner in which they provide contemporary solutions to such age-old problems as man's need for shelter, a place of meeting, a center of learning and a sanctuary for prayer. Taken together, they bear dramatic witness to the high level of architecture at mid-century.

The individual building grows out of the lifework of its architect. For that reason an abridged selection of previous constructions, as well as one advance project, has been included to give a perspective on the central concerns of each man. It is regrettable that the space limitations imposed on a traveling exhibition have restricted the number of architects. The greatest sign of health in today's architecture is the strength and number of its practitioners. Without loss of quality, the list of architects might well have been doubled, the works on exhibition quadrupled.

The buildings shown represent primarily the work of architects in the U.S. That such a limitation was not crippling is in itself a significant commentary on the key role played by this country in contemporary architecture. For the U.S. has not only produced native sons of extraordinary creative abilities in this century, but also proved a generous host to architects the world over, who found that they could work only in an atmosphere of freedom. Of the architects exhibited here, half are foreign born; all but Alvar Aalto and Le Corbusier (included because of their dramatic impact on the main currents of modern architecture) are now U.S. citizens.

As a result, architecture in the U.S. has reached a high level of accomplishment. In the past decade it has become an international force. Buildings by the American architects included here are now planned or built for London, Berlin, Paris, Lima, Beirut, Santiago (Cuba), Baghdad, Karachi, Rotterdam and Brussels. The enlightened sponsorship of leading U.S. architects by the State Department has made embassies by these architects known abroad in The Hague, Athens, Oslo, New Delhi and Rio de Janeiro. To no other art has the U.S. made a more dramatic world contribution or given more decisive proof of its coming of age.

The American architect who best stated the challenge confronting architecture in this century was Louis Henri Sullivan (1856-1924): "The fabricating of a virile, a proud and kindly civilization, rich in its faith in man, is surely to constitute the absorbing interest of the coming generations." And it is with Sullivan's transcendent humanism in mind that most of these buildings must be judged. Sullivan himself, with his dictum "Form follows function," struck a death blow to the Beaux Arts tendency to view architecture as applied archaeology. Sullivan maintained the proud position that architecture is an art, one that must ever heed the imperative voice of emotion. His own great contribution to the vocabulary of modern architecture was to conceive the form that the skyscraper was to take. In his Wainwright Building (1891) in St. Louis, it was seen for the first time as "every inch a proud and soaring thing, rising in sheer exultation that from bottom to top it is a unit without a single dissenting line."

No form has emerged more dramatically to punctuate the 20th century skyline, whether it is the powerful complex of Rockefeller Center, the precise and jaunty vertical-and-horizontal set of Lever House, a stalwart sentinel on the plains like Frank Lloyd Wright's Price Tower, or an object of great elegance like Ludwig Mies van der Rohe's bronze-sheathed Seagram building.

Wainwright Building (1891), St. Louis, Mo.—Adler & Sullivan

The skyscraper, thrilling as it is, far from encompasses the full range of modern architecture. Too often the view from the spire discloses a carpet of urban sprawl rolling out to the ragged fringes of suburban chaos. Yet ironically, it is toward a concept of total design, ranging in scope from the practical implements of daily life to a master plan for city and region, that architects have been striving. Architecture transcends the mere materials and spaces to be organized. Implicit in each architect's forms is a larger concept of life. The master form givers of today's architecture have elaborated and orchestrated a host of new solutions that give texture and significance to the cultural life of the present day. Their pioneering work acts as the vital humus, nourishing the second generation of architects now coming into its own.

Frank Lloyd Wright, whose 90th birthday would have coincided with this exhibition, was unique among architects in that he created, singlehanded, a complete form world of his own. His writings have affinities with both Emerson and Whitman; his ideal society of small independent landowners (Broadacre City) echoes the democratic ideals of Jefferson. But it was his matchless plastic vision, which grasped space as something tangible to be played with until it became a poetic circumstance, that gave Wright the power to create an architecture both as modern as the 20th century and as old as the 6th century B.C. Chinese Philosopher Laotse's insight: "The reality of the building does not consist in roof and walls but in the space within to be lived in."

There is hardly a form in architecture that Wright did not reorganize, from the interior spaces of the home under the broad eaves of his prairie houses to complex office structures. Exalting and emphasizing materials according to their nature and welcoming new engineering techniques, Wright made his buildings into astonishing works of art. A culmination of Wright's work is the Solomon R. Guggenheim Museum, a new form as integrally itself, within and without, as the shell of the chambered nautilus.

Walter Gropius also realized that "the dominant spirit of our epoch is recognizable, although its form is not yet clearly defined." A planner and method giver as well as architect, Gropius founded the Bauhaus in 1919 in Weimar, Germany, to explore the possibilities of a fusion of art and technology. A magnet that attracted the most creative spirits of Middle Europe and Russia, the Bauhaus under Gropius became a huge design laboratory. From it was derived an esthetic for machine production, exemplified in typography and textiles, furniture and building itself, that has gone far to give the century its own flavor and content. His arrival at Harvard in 1937 is a milestone in modern American architecture; his work with The Architects Collaborative since that time has been a consistent development of his Bauhaus-stated principles.

In France, Le Corbusier has been since the 1920s a primary regenerating force in the revival of the great Mediterranean tradition of building. He is the least known of the major figures of modern architecture in the U.S., where his work is recognizable mainly in the form of his decisive contribution to the United Nations Secretariat. But Le Corbusier is a prophet with high honor throughout the Latin world, and in fact wherever concrete, rather than steel, is a major building material. He has combined the revolution in esthetics stemming from cubism with an ability to systematize rigorously his radical concept of an ordered society. His details (sun-breakers, buildings raised on *pilotis*) have been copied to the point of cliché. Le Corbusier's chapel at Ronchamp grows out of his own development as a painter and sculptor, and gives visual meaning to his famous definition: "Architecture is the masterly, correct and magnificent play of masses brought together in light."

Ludwig Mies van der Rohe stands today as the classic end of the spectrum from Wright's prolific and exuberant romanticism. A master technician in a technological age, Mies believes in refining a problem down to its elements, then solving it with the greatest economy of means. Since the enclosed space may serve many functions during the lifetime of the building, he creates a universal envelope that gains its identity from the partitions or forms set within it. By raising structure to the level of first principle and then refining it to an esthetic, Mies has created an architecture of great ascetic beauty.

Continuity and development are the two vital requisites of any great architecture. Both are present in this exhibition, not as slavish imitation of any single style but as different declensions in the grammar of modern architecture. The houses of Richard J. Neutra, one of the pioneer practitioners of modern architecture in the U.S., testify to Neutra's refined psychological insight into the problems involved in a habitat for man. The great Finn, Alvar Aalto, by remaining true to his native materials and inspiration, has enriched architecture with his free forms, undulating line and ability to seize on the chance and occasional. Marcel Breuer has expanded the forms derived from his Bauhaus background into a logical, personal style of his own that culminates in the new UNESCO headquarters in Paris.

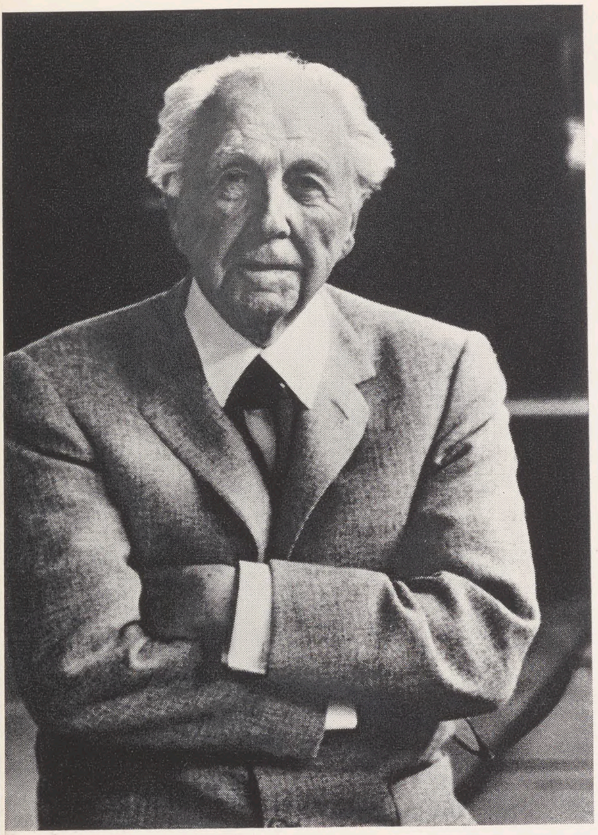
The precision and finish of American buildings evoke admiration the world over. The large firm of Skidmore, Owings & Merrill, working at a consistently high level to organize and refine the complex elements of planning and design, is the outstanding example of how the thesis buildings of such founders of modern architecture as Mies van der Rohe have been adapted to the broad, practical requirements of the marketplace without loss of quality.

Philip C. Johnson, who has acted as both biographer and co-architect (in the Seagram building) of Mies van der Rohe, has produced work of great sensitivity and elegance in a Miesian idiom, at the same time indicating new possibilities for the development of concepts of baroque space. Eero Saarinen has employed the modular strictness of Mies in the General Motors Technical Center and a variation of Mies's universal space in the M.I.T. Auditorium. Saarinen, the architect who often makes the moves first for his generation, has also drawn on his own personal gift of sculptural plasticity in the T.W.A. Terminal, Idlewild, to produce a dramatic and consistent form world for a magnificent port of entry for the air age.

As modern architecture has gained in confidence, architects are addressing themselves increasingly to the problem of re-creating the great architectural experiences of the past with the means and methods of today. This new move toward monumentality and enrichment is exemplified in the United States Embassy at New Delhi, designed by Edward D. Stone. A modern structure, it is evocative of the Greek temple and the lacy stone screens of the Taj Mahal. Wallace K. Harrison's First Presbyterian Church in Stamford, Conn. takes its *parti* from La Sainte Chapelle in Paris. But by carrying the stained glass up and over the roof, he has created a new architectural experience possible only in terms of modern construction.

Many of the buildings on view indicate that the separation of engineering and architecture is rapidly closing, for they gain their excitement from the new engineering principles brought into play. How far the incredible potential of already known materials can be pushed has been dramatically indicated by Frank Lloyd Wright's "Mile-High Illinois." The world of concrete-shell structures offers equally exciting possibilities. R. Buckminster Fuller's geodesic domes, light enough to be flown round the world by airplane, yet theoretically vast enough to shelter whole cities, open additional prospects of a whole new world of forms to come.

Each such contribution is a landmark of man's expanding potential. Together these forms not only mark and celebrate his time on earth, but give a new balance to the immense forces of an expanding technological age. As structures designed by man for the enjoyment of man, they also bring substance to the great vision summoned up by that poet-prince among architects, Louis Sullivan: "The living idea of man, the free spirit, master of his powers, shall find its form-image in a civilization which shall set forth the highest craftsmanship, the artistry of living joyously in stable equilibrium."



FRANK LLOYD WRIGHT

born June 8, 1869, Richland Center, Wisconsin
died April 9, 1959, Phoenix, Arizona

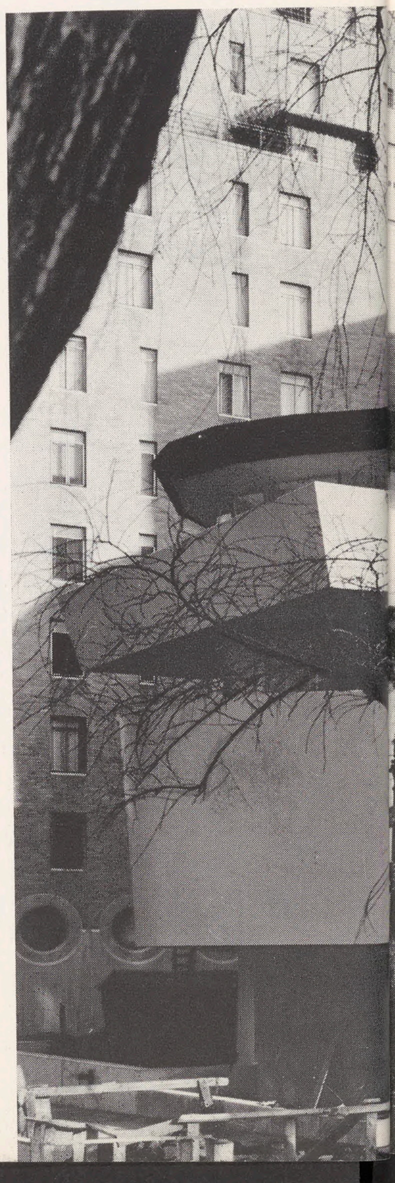
The oldest item in this exhibition is the elevation drawn by Frank Lloyd Wright, and shown to the man he called "Lieber Meister," Louis Henri Sullivan, when applying for a job as draftsman in 1888. The newest structure here is also Wright's: the Solomon R. Guggenheim Museum, completed in 1959.

At a time in life when honors hang heavy on a man — and Frank Lloyd Wright had them all — Wright lived and worked for the present and the future. Not content with having designed well over 2,000 buildings, and having built 1,000-odd, Wright continued the great adventure of architecture. At night over the Arizona desert of Taliesin West the lights shone bright from Wright's drafting room far into the night as nearly 100 design projects were pushed to completion. It is in that light, and the Great Spirit that shone behind it, that the world mourns Frank Lloyd Wright, pre-eminent among architects, an American to the core and a genius among artists to rank with the great of all the ages.

"What is architecture anyway? Is it the vast collection of various buildings which have been built to please the varying taste of the various lords of mankind? I think not. No, I know that architecture is life; or at least it is life itself taking form, and therefore it is the truest record of life as it is lived.

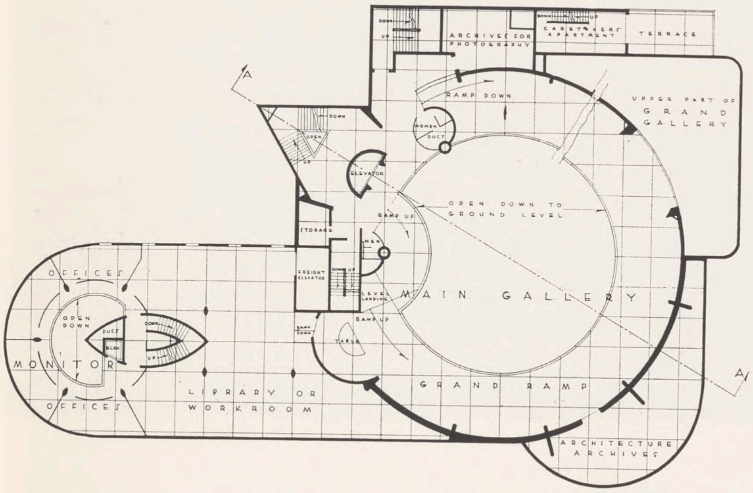
"Architecture is that great living creature spirit which from generation to generation, from age to age, proceeds, persists, creates, according to the nature of man, and his circumstances as they change. That is really architecture."

Frank Lloyd Wright

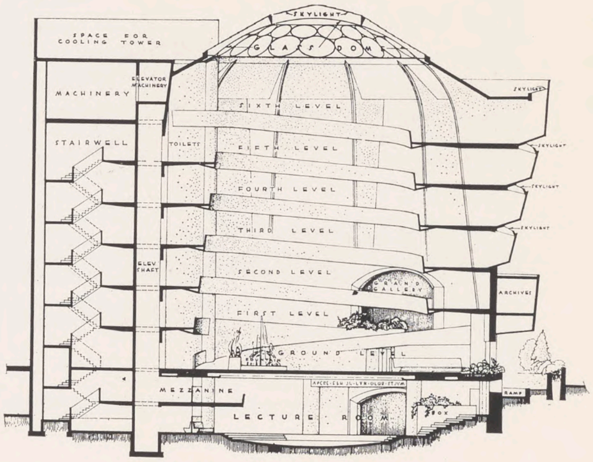


SOLOMON R. GUGGENHEIM MUSEUM (1959)
Fifth Ave. & 88th St., New York

"There is no outside independent of the inside — the two are as one — organic — integral. For the first time, a building has been designed which destroys everything square, rectilinear. It provides an open road for the painter who sees beyond what is being done now."



PLAN OF FIRST LEVEL



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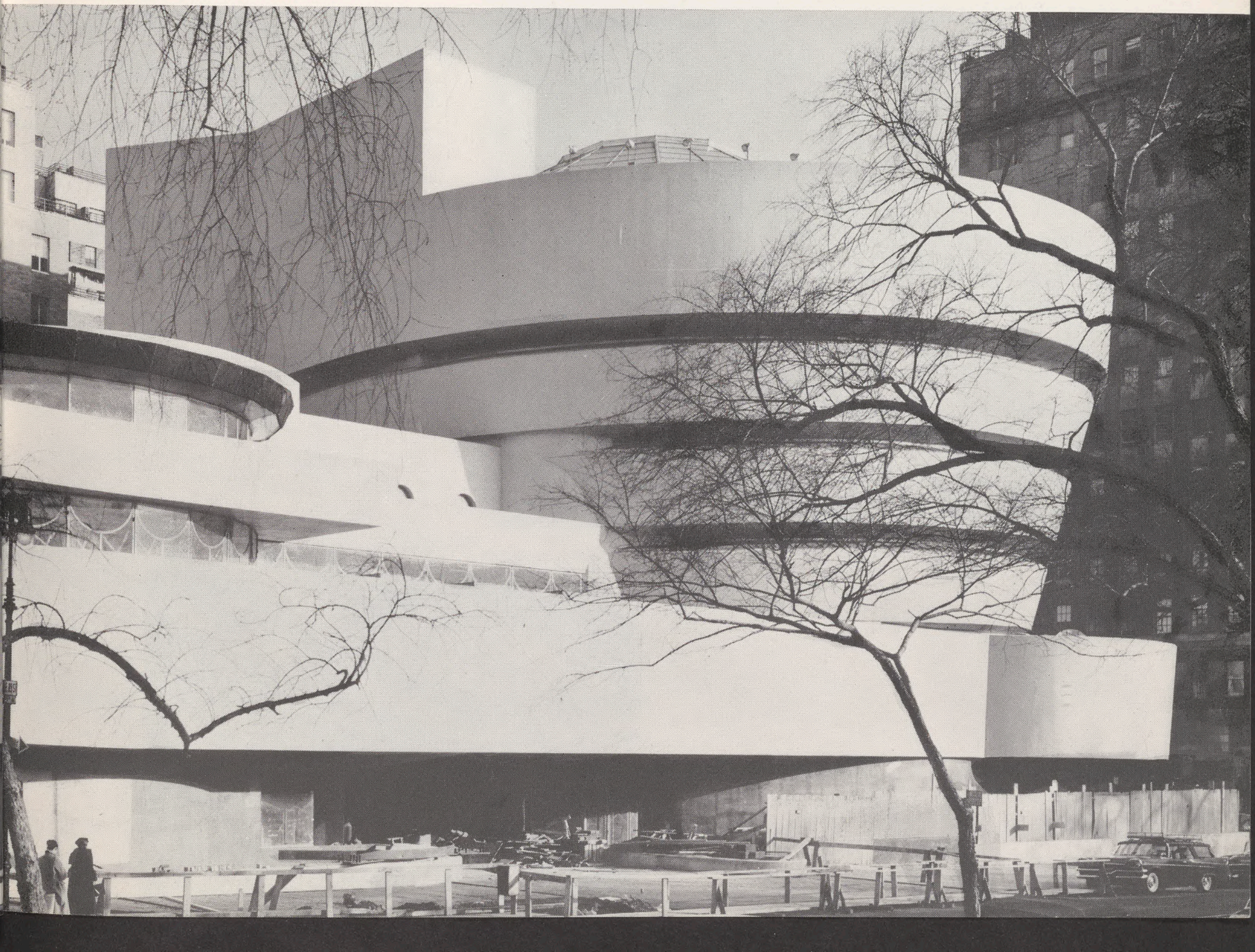
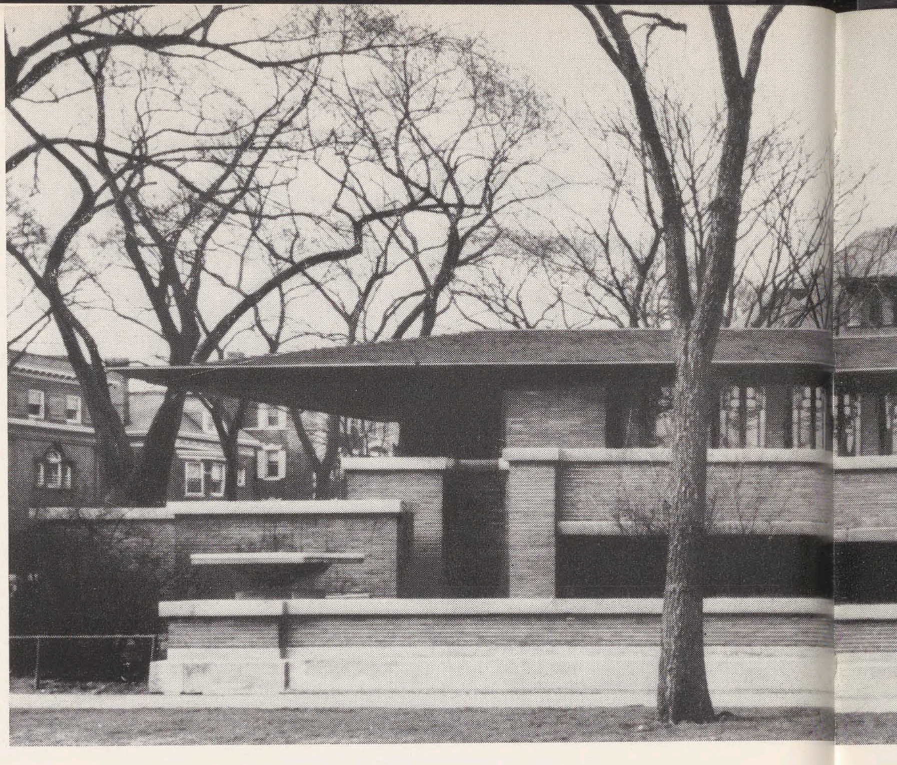
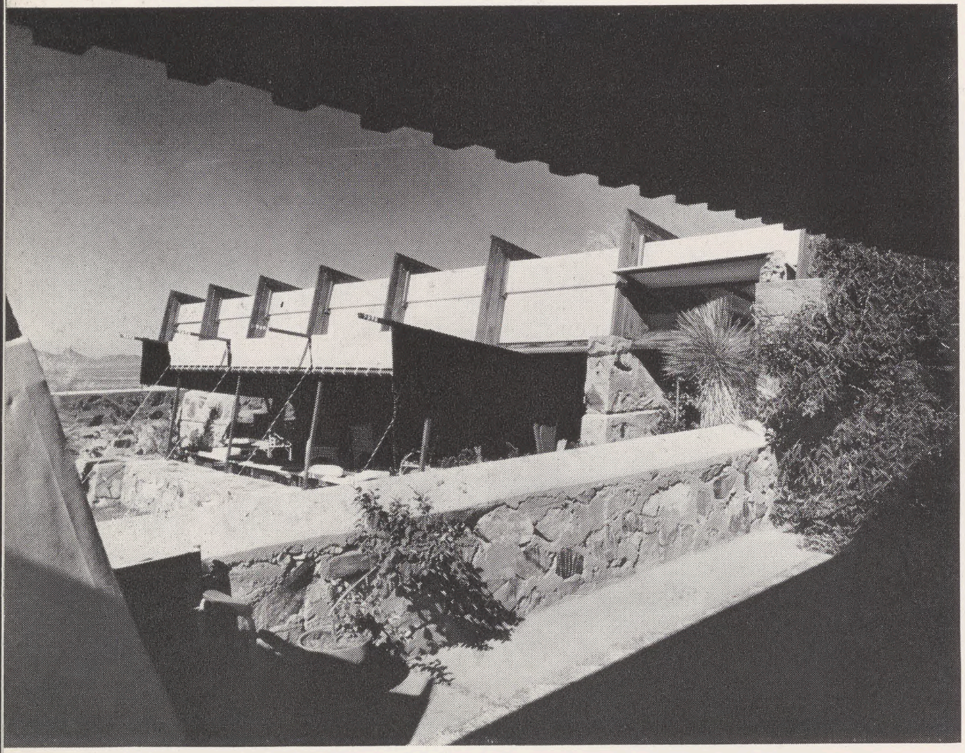
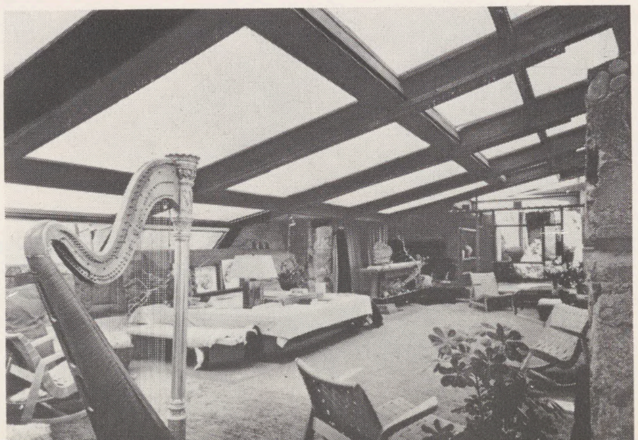


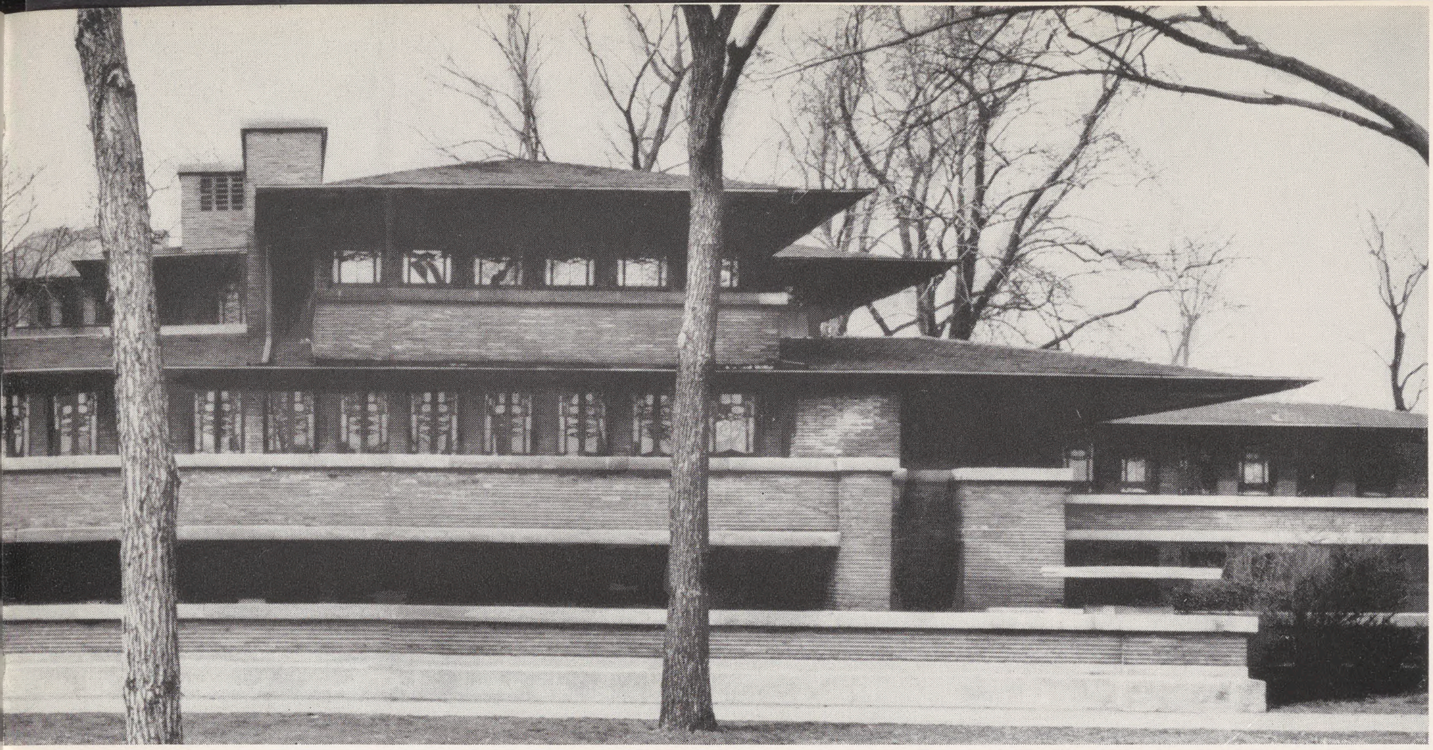
FREDERICK C. ROBIE HOUSE, Chicago (1909)
"The planes parallel to the earth in buildings identify themselves with the ground, do most to make the buildings belong to the ground. I see this extended line as the true earth-line of human life, indicative of freedom. Always."

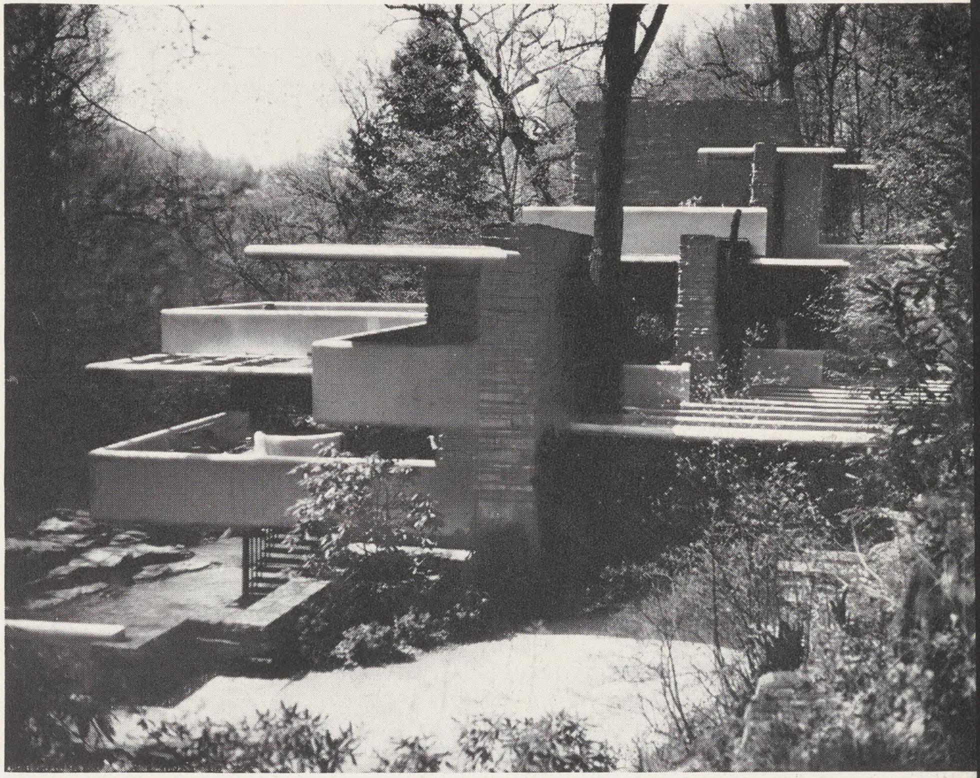




TALIESIN WEST, Scottsdale, Arizona (1938-)
"Arizona character seems to cry out for a space-loving architecture of its own. The straight line and flat plane must come here—of all places—but they should become the dotted line, the broad, low extended plane, textured, because in all this astounding desert there is not one hard undotted line to be seen."

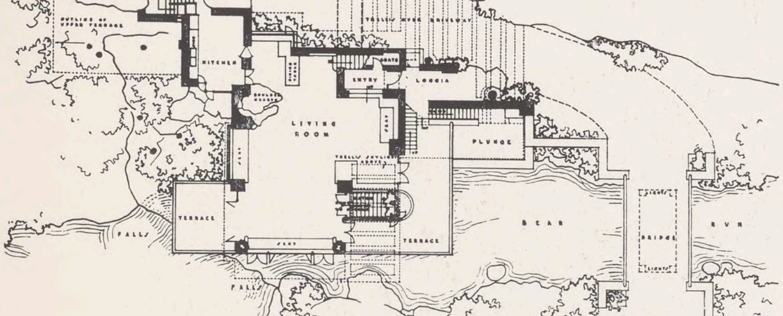


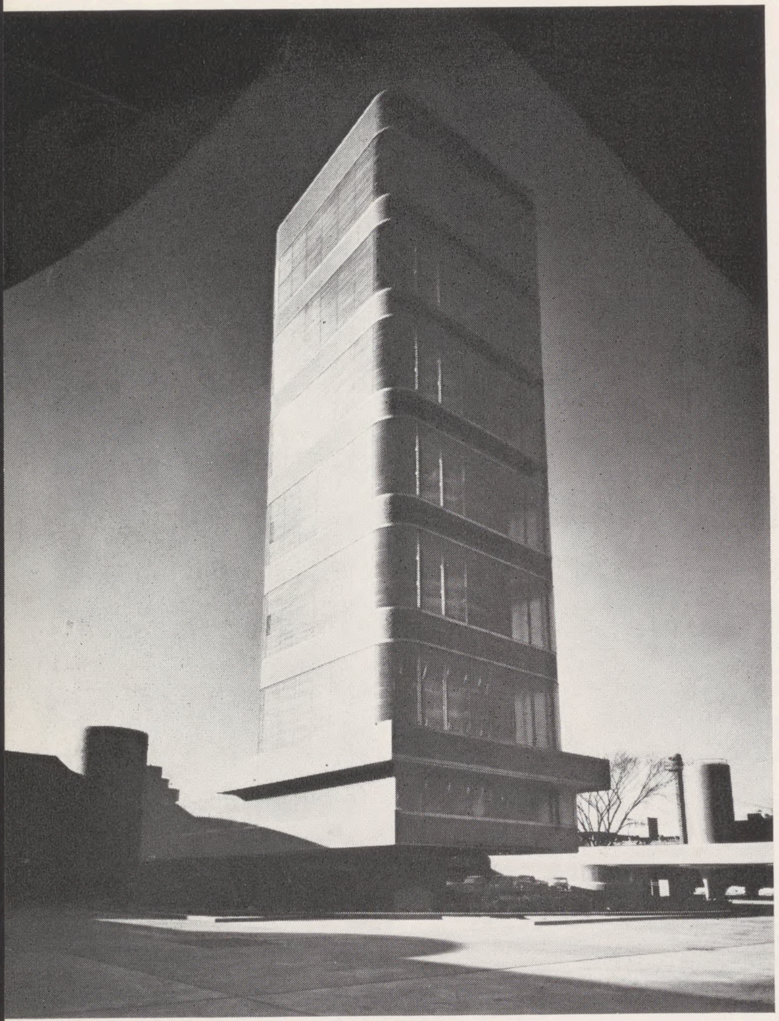




"FALLING WATER," EDGAR KAUFMANN JR. HOUSE,
Bear Run, Pa. (1936)

"In a beautiful forest, a solid high rock
ledge rising beside a waterfall . . .
The natural thing seemed to be to cantilever
the house from that rock-bank
over the falling water."

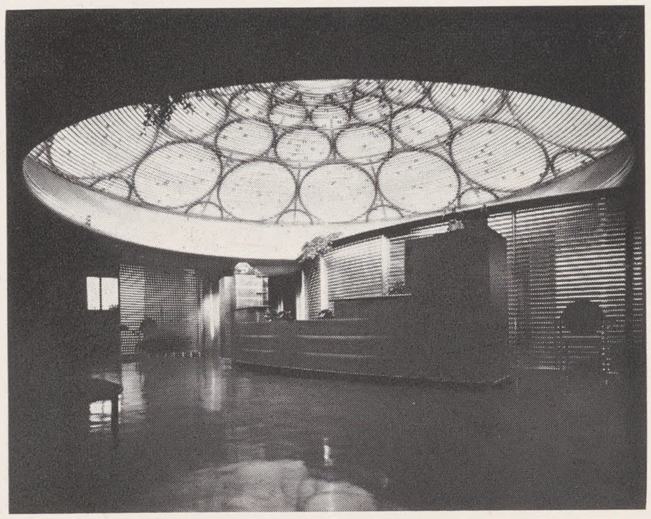




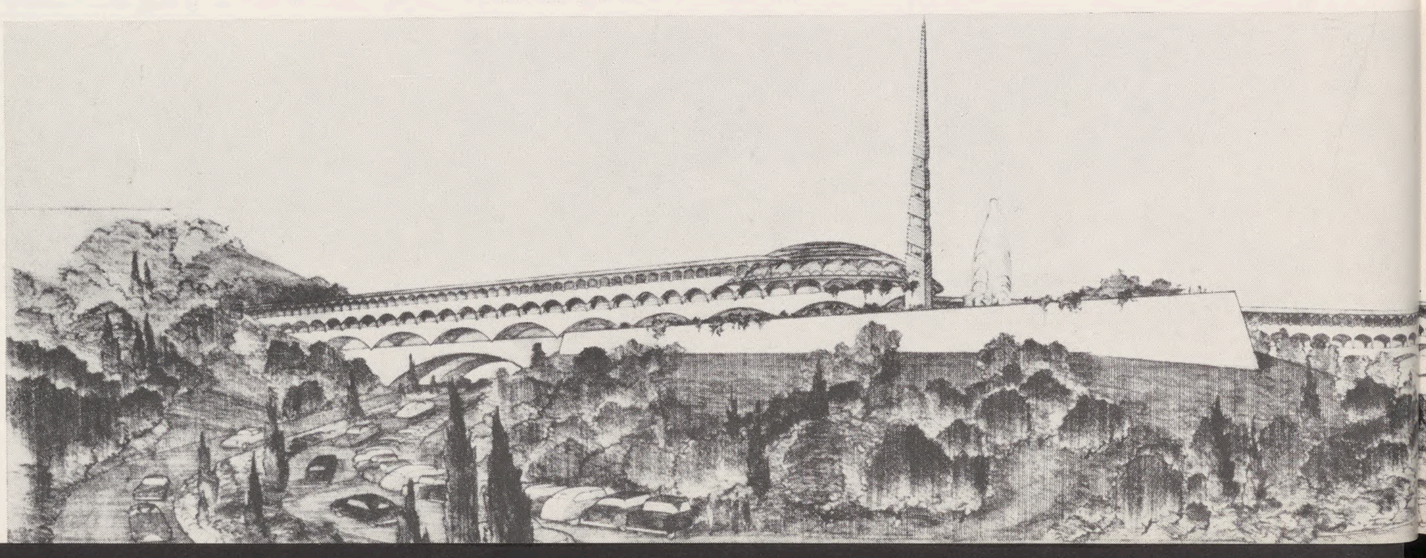
Heliolaboratory, S. C. Johnson & Son,
Racine, Wis. (1947-49)

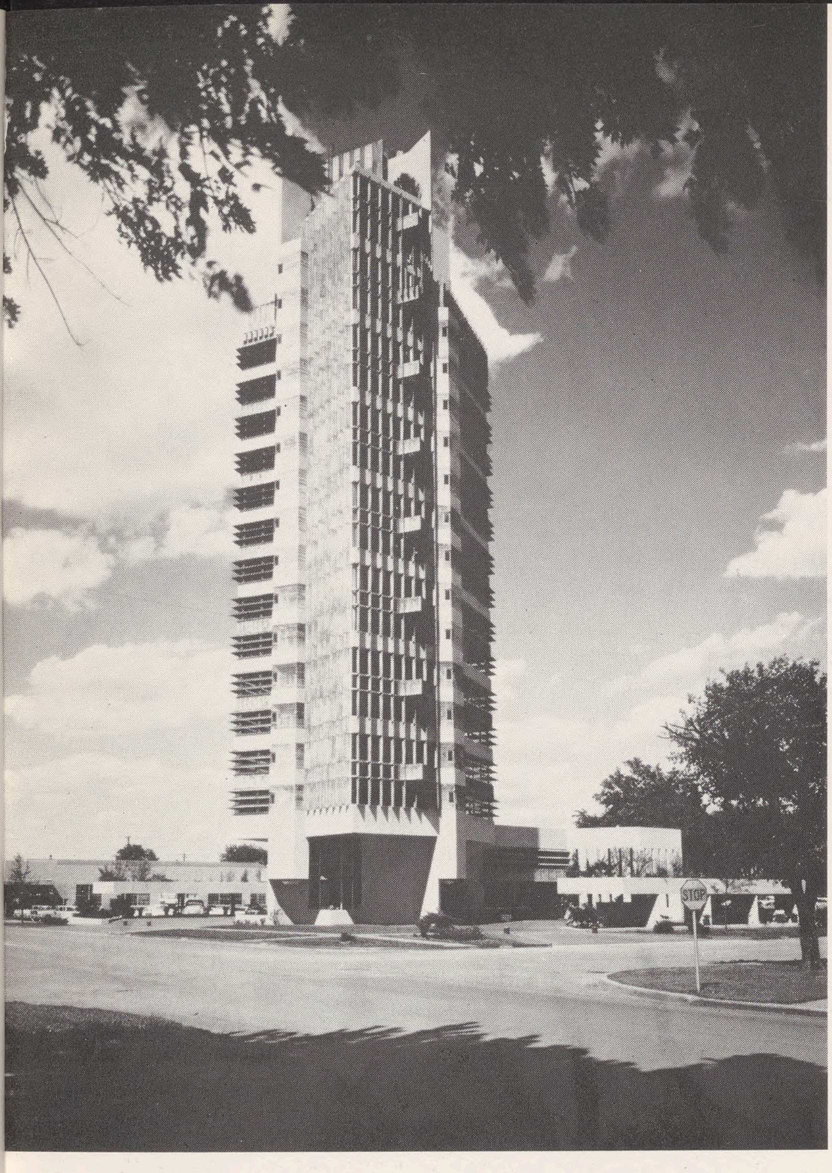
"So we went up in the air around a giant
central stack with floors branching from it,
having clear light and space all around each floor.
This seemed to me a natural solution,
affording all kinds of delightful, sunlit, directly
related work space."

S. C. Johnson & Son (1936-39),
reception room



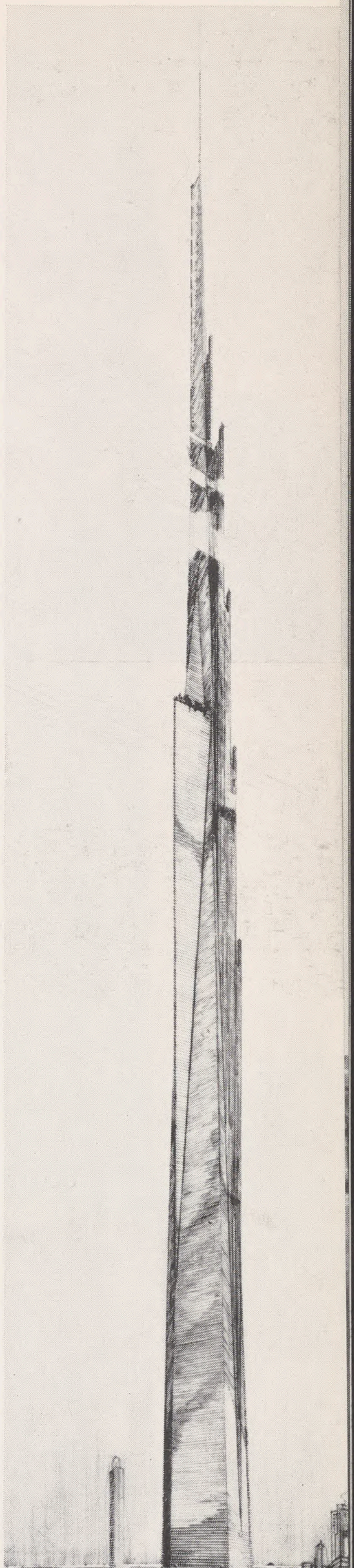
Marin County Government Center, Calif. (1960), drawing





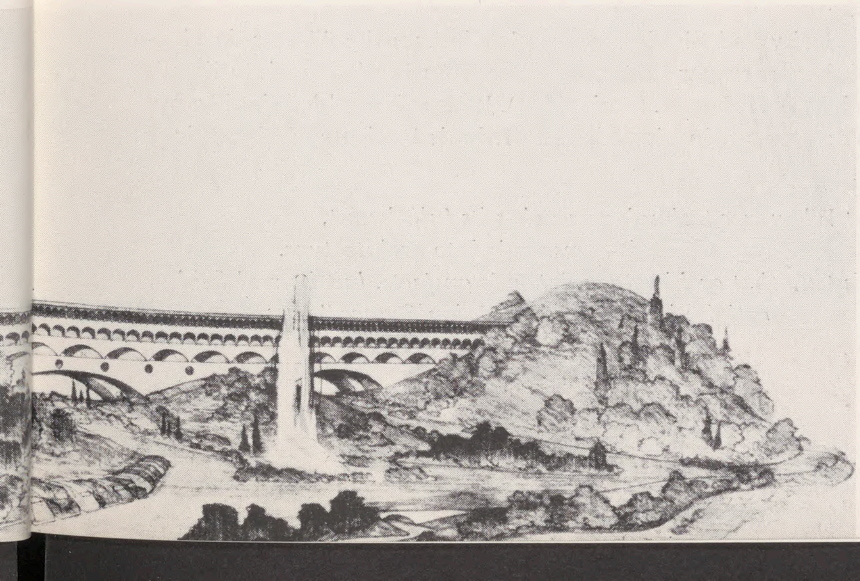
H. C. PRICE CO. TOWER, Bartlesville, Okla. (1956)

"The tree that escaped the crowded forest, a 19-story skyscraper in the country. Construction is from inside out, with steel used in tension as proper in 20th century architecture."



"THE MILE-HIGH ILLINOIS", project (1956)

Like a rapier, with handle set firmly in ground, the sky-city rises a mile in space. Set in bedrock like a taproot the tripod of rigid steel will have cantilevered from it 528 stories. Five-deck elevators propelled by atomic power will service the 100,000 occupants.



LUDWIG MIES VAN DER ROHE

born March 27, 1886, Aachen, Germany

Prior to his arrival in the U.S. in 1938 to become Director of Architecture, Illinois Institute of Technology, Mies van der Rohe was already well-known as one of the most important originators and organizers of the emerging architecture of the 20th century. From 1930-33 Mies had been director of the Bauhaus. His best-known building was the German Pavilion, Barcelona (1929), which through its economy of means, rich materials and free planning had affinities with the Dutch *de Stijl* movement and early Frank Lloyd Wright houses.

In this country Mies's buildings and site plan for the Illinois Institute of Technology and apartment houses along Lake Shore Drive, Chicago, are outstanding examples of his rigorous esthetic principle: "Less is more." Precision of detail, refinement of structure and the discipline of a common module, as well as the careful positioning of one building to the next, give to these buildings their own quality of beauty.

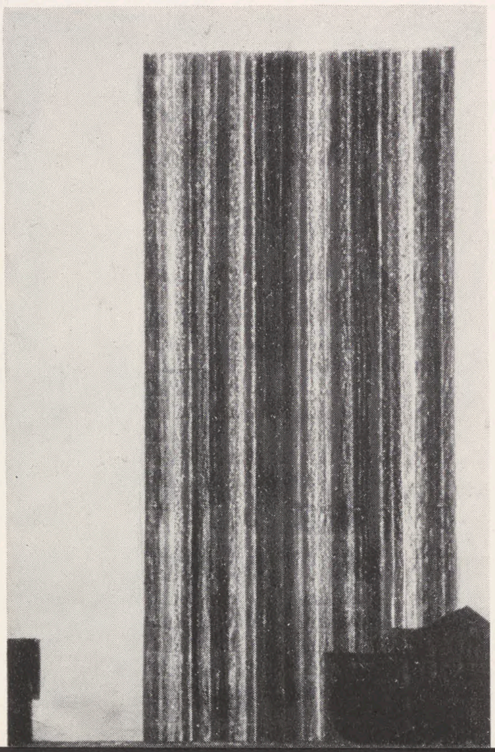
Because Mies feels that interior space may change in function during the life of a building, he designs his larger spaces as an envelope to enclose anonymous space, which can be defined over the years in terms of the movable elements (walls, acoustic elements) placed or hung within it. Both Crown Hall (1956) at I.I.T. and the new Cullinan Hall, Houston Museum of Fine Arts (1959), show this principle in operation.

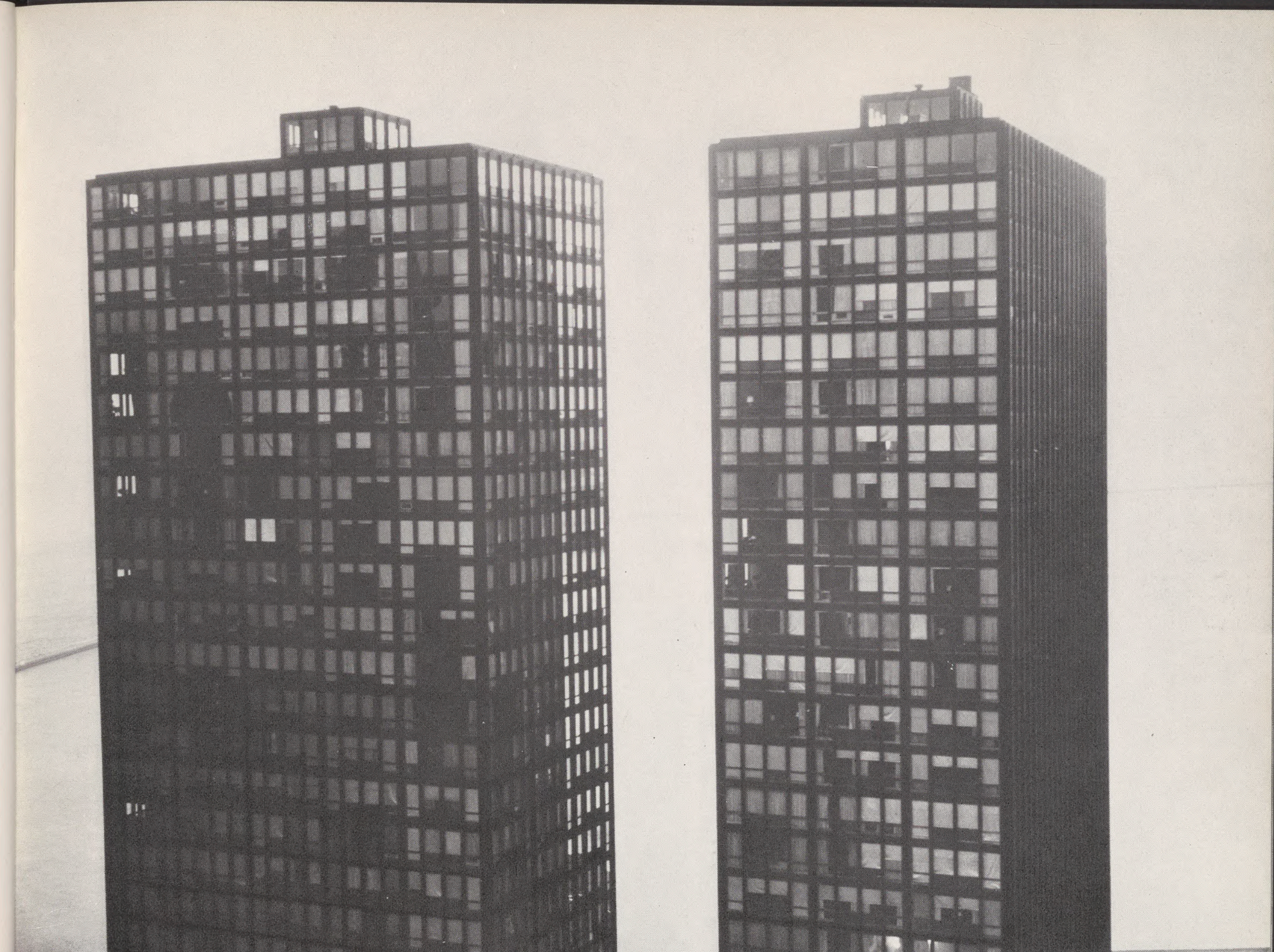
Although Mies van der Rohe has been concerned with skyscraper designs since the early 1920s, his first opportunity to build one came with the House of Seagram, 375 Park Avenue, New York. This 38-story structure, for which Philip Johnson acted as co-architect, Kahn & Jacobs as associate architects, is sheathed from top to bottom in architectural bronze, making it one of the most richly textured skyscrapers ever built. Vertical I-beams are welded to the exterior, where they not only act as mullions but give a lively, vertical pattern to the exterior. Setting off the handsome structure is its own 90-ft.-deep plaza, paved with pink granite and set with twin pools and weeping beeches.

In its clarity and dignity Seagram's climaxes the 67-year development of the skyscraper form that dates from Louis Henri Sullivan's Wainwright Building, St. Louis (1891). It also gives added significance to Mies's statement in his address to Illinois Institute of Technology (1950):

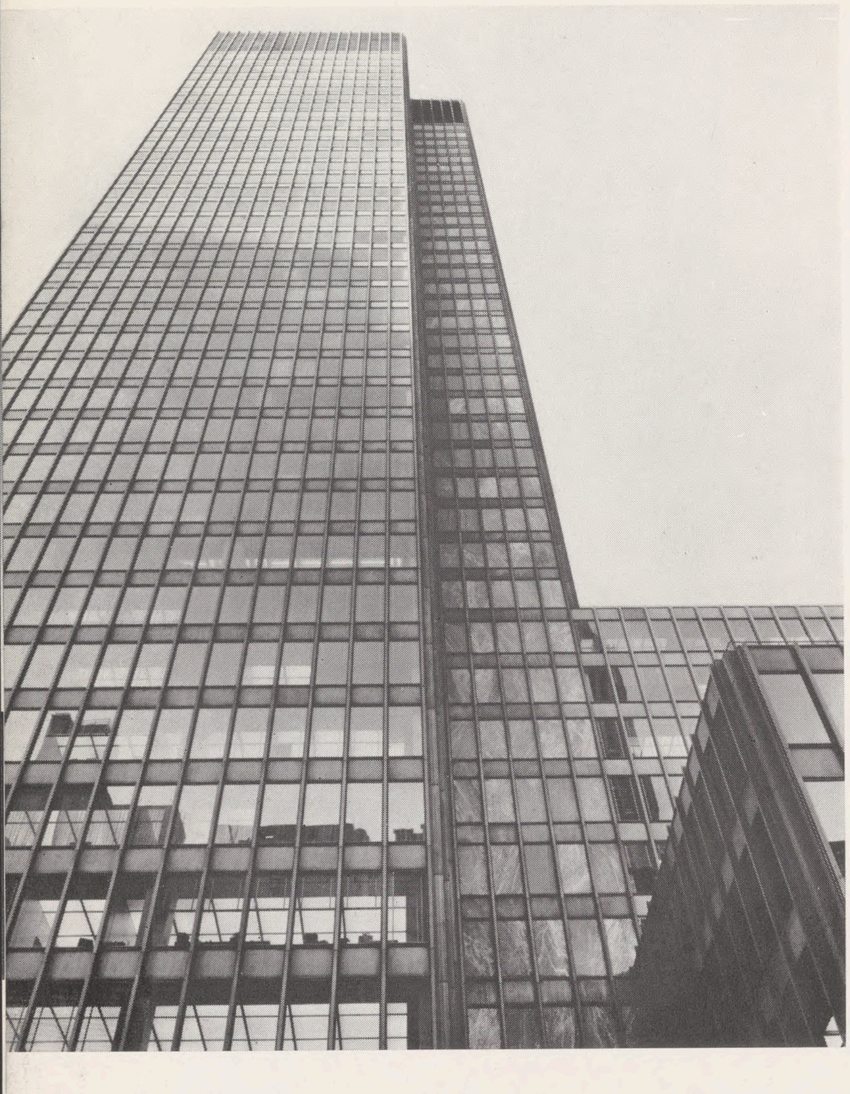
> *"Whenever technology reaches its fulfillment,*
> *it transcends into architecture.*
> *It is true that architecture depends on facts, but its real field of*
> *activity is in the realm of significance."*

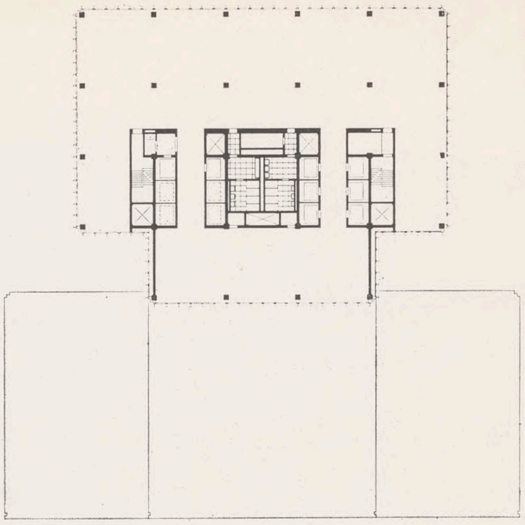
Glass Skyscraper (1920-21), drawing





860 Lake Shore Drive Apartments, Chicago (1951)





Plan, ground floor and plaza

House of Seagram, 375 Park Avenue, New York (1958)

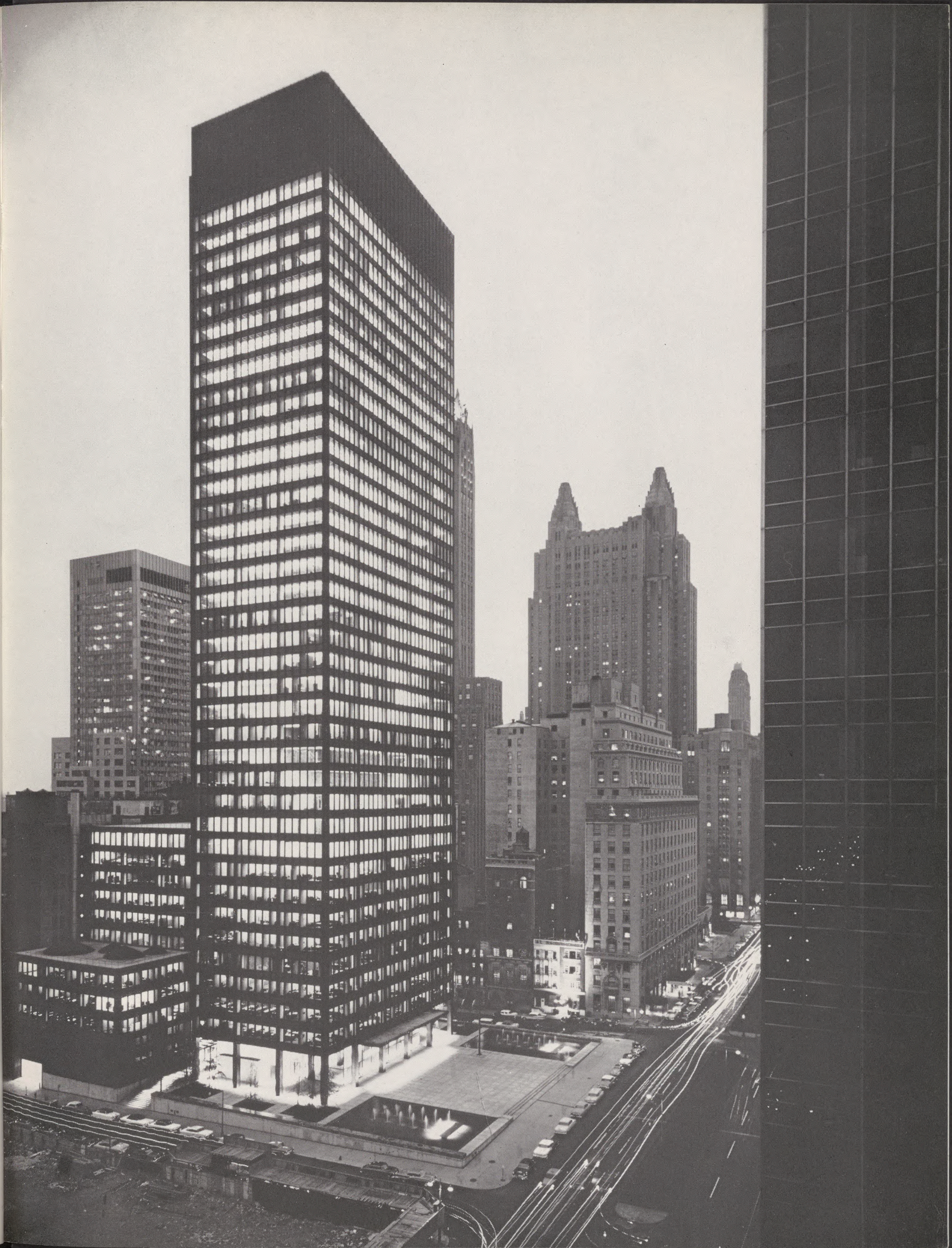
Architects: Ludwig Mies van der Rohe and Philip Johnson

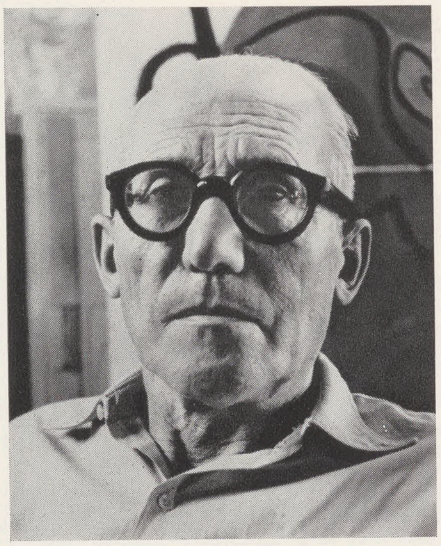
Associate Architects: Kahn & Jacobs

Structural Engineers: Severud-Elstad-Krueger Associates

A culminating structure in the development of the skyscraper form dating back to Adler & Sullivan's Wainwright Building (1891), the Seagram building rises 38 stories from its 90-ft.-deep plaza. The first building to be sheathed entirely in architectural bronze and grey-tinted glass, the tall tower is a study in precision and restraint, clarity and dignity, carried out in the richest of materials.

House of Seagram, with Lever House (right)



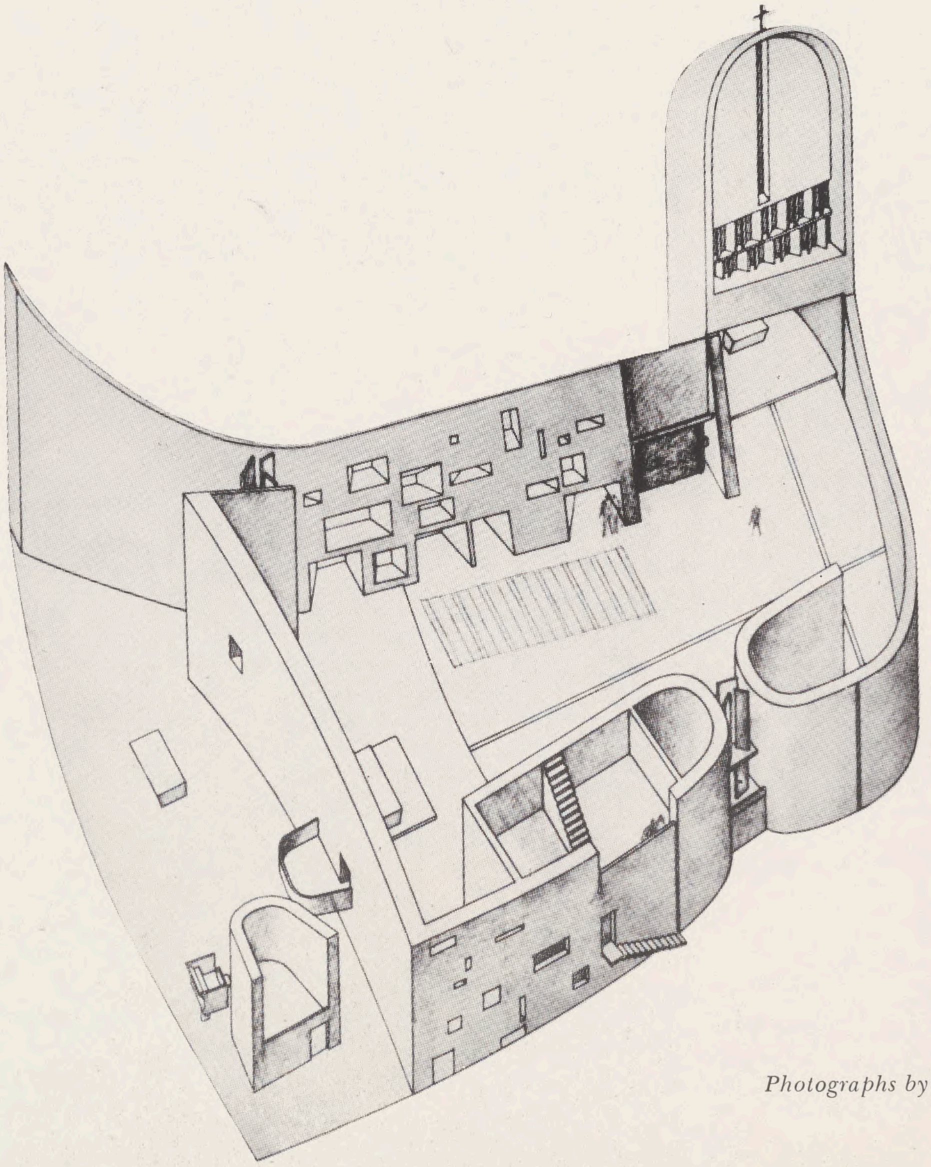


LE CORBUSIER

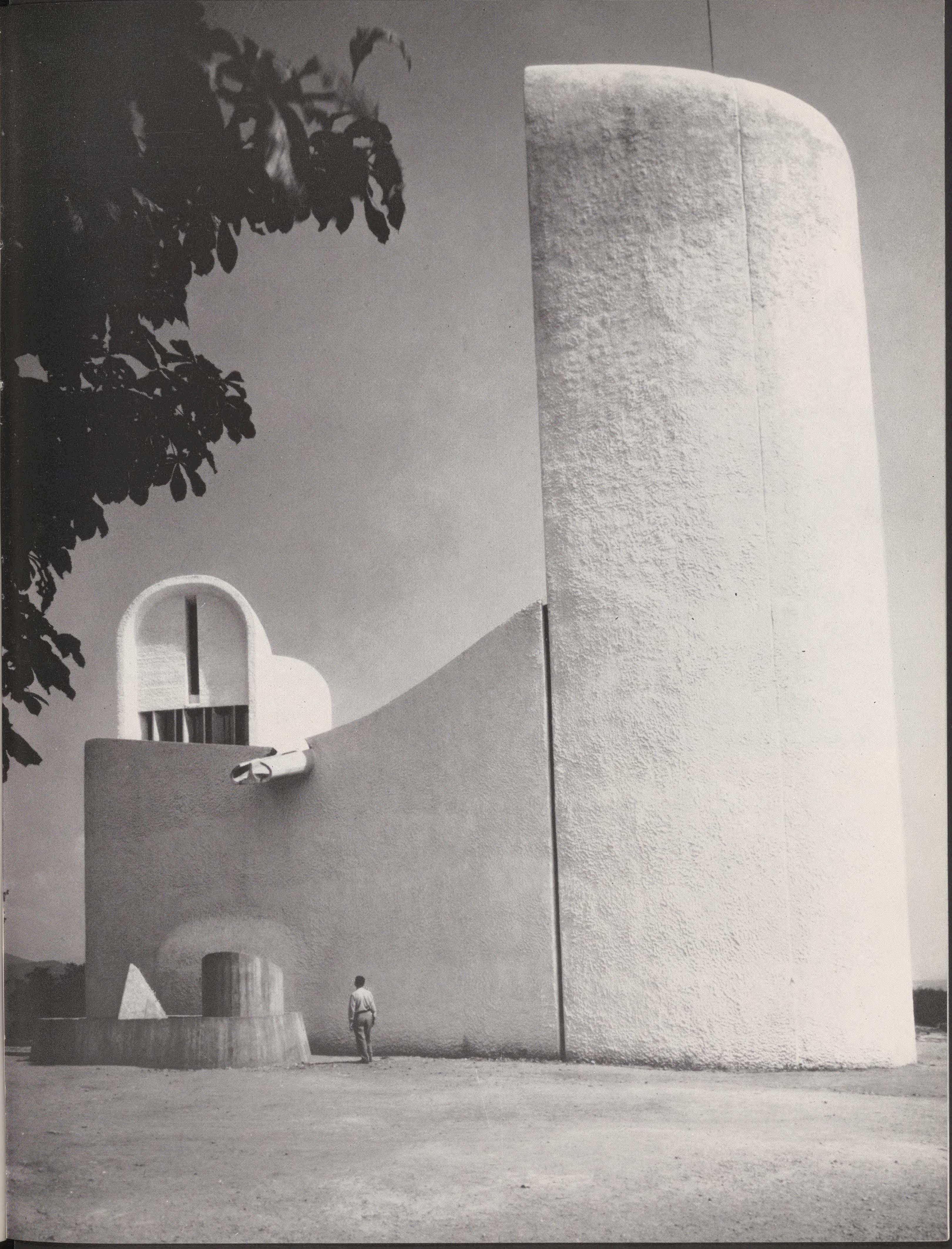
born Oct. 6, 1887 (Charles Edouard Jeanneret), La Chaux-de-Fonds, Switzerland

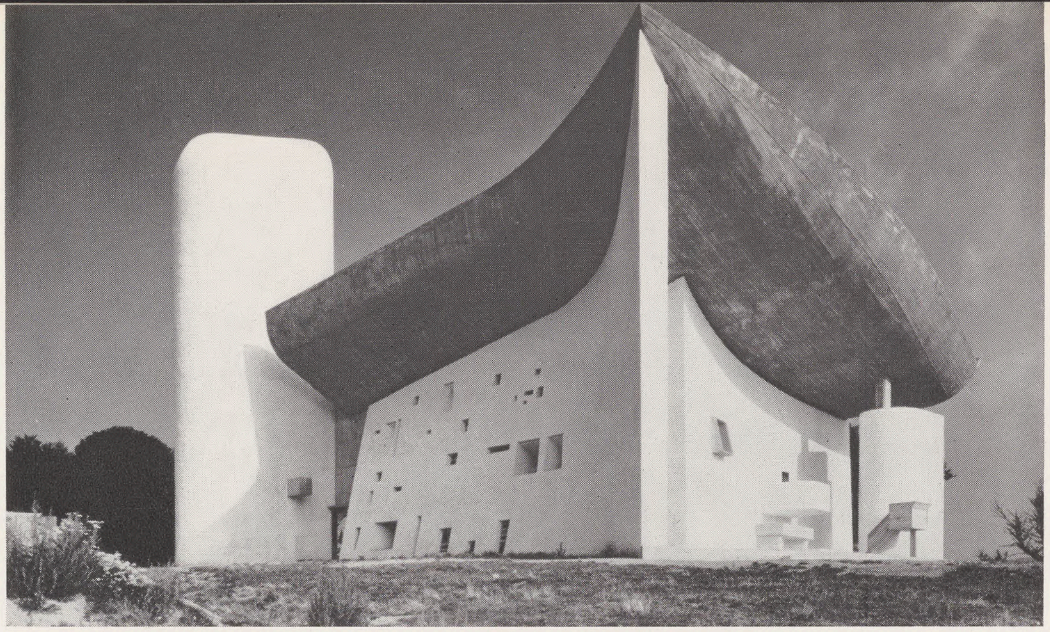
"Architecture is the masterly, correct and magnificent play of masses brought together in light."

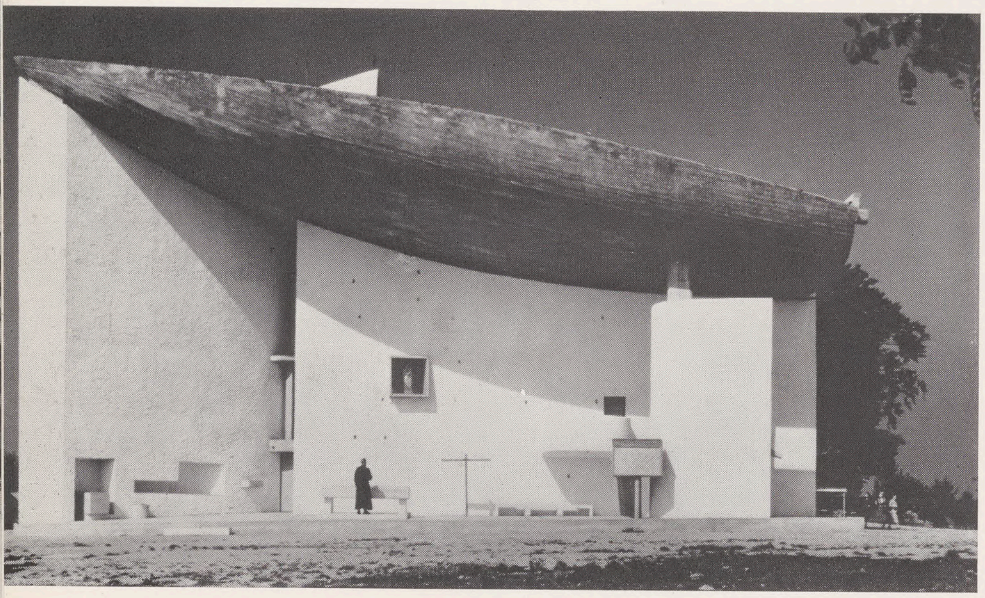
No building better illustrates Le Corbusier's famous definition of architecture than the small pilgrimage chapel, Notre-Dame-du-Haut, Ronchamp, France (dedicated June 1955), built atop a bastion of the Vosges mountains on a site hallowed since pagan times. Le Corbusier took as his suggestion for forms the profile of the four horizons, then designed a structure in reinforced concrete, using the rubble left over from a previous chapel destroyed by gunfire in World War II. The chapel's highly plastic forms, as well as the decoration of the doors and windows, derive from Le Corbusier's practice as painter and sculptor. The resulting synthesis of talents is thus a highly personal work, but one that has already become a goal for both architectural and religious pilgrimages.



Photographs by Ezra Stoller







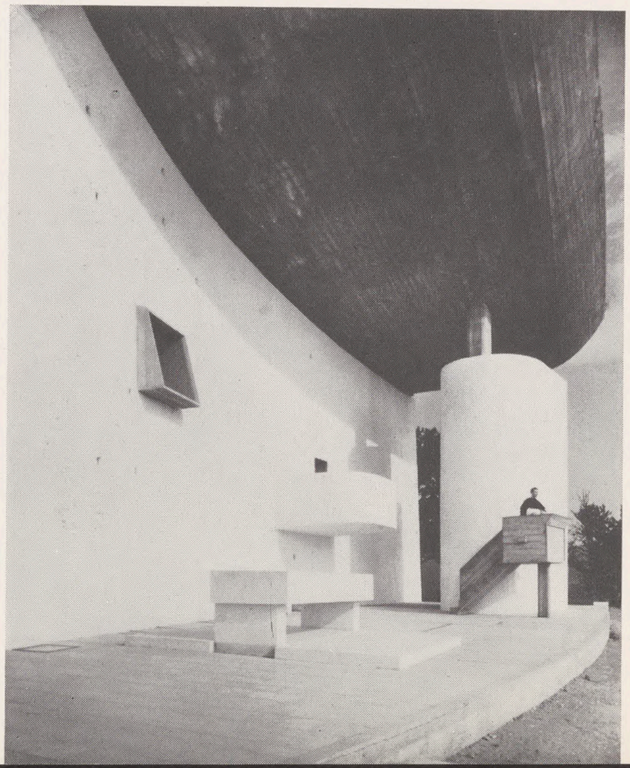
24
6
56
Cap Martin

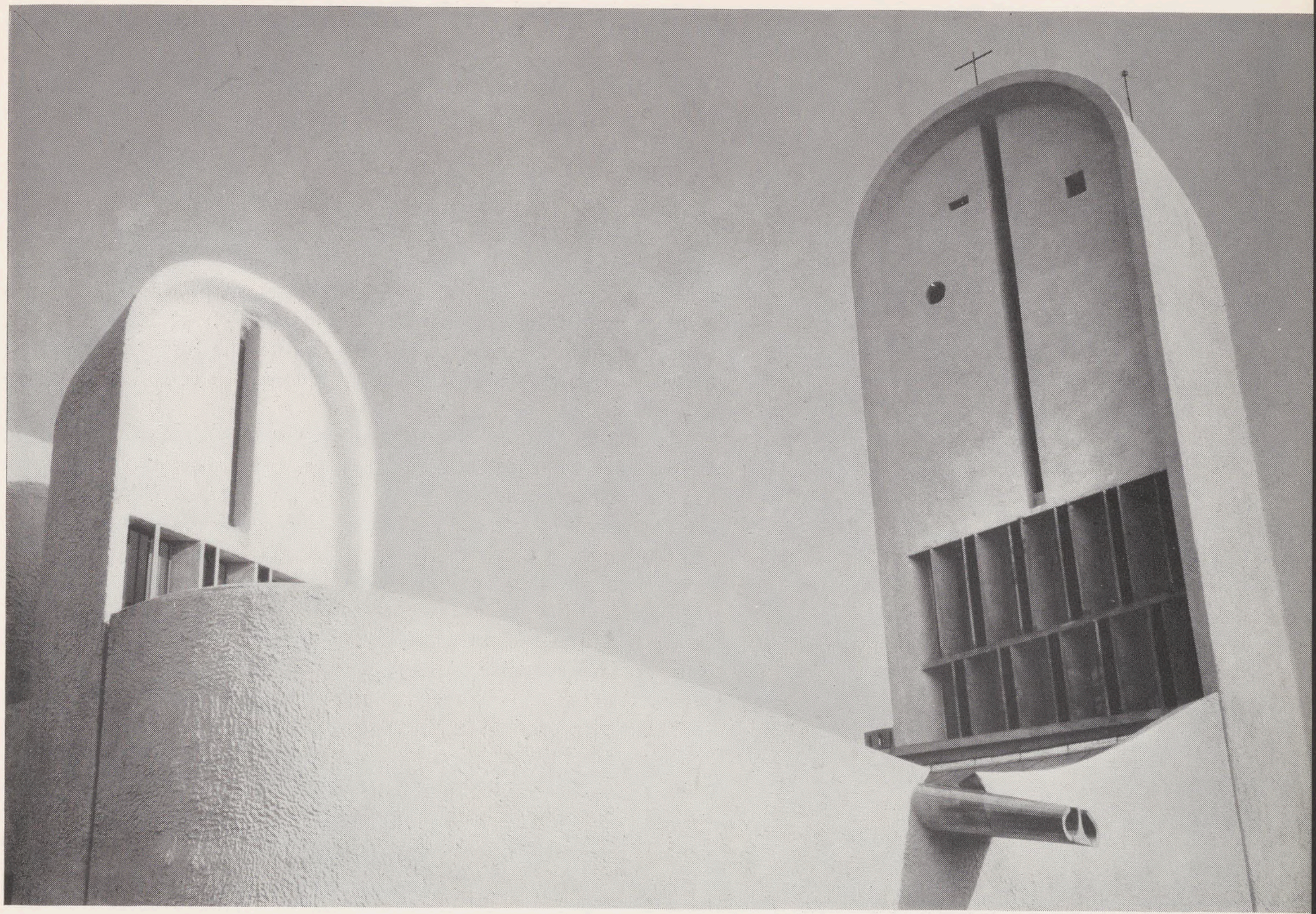
The key is light
and light illuminates shapes
and shapes have an emotional power.

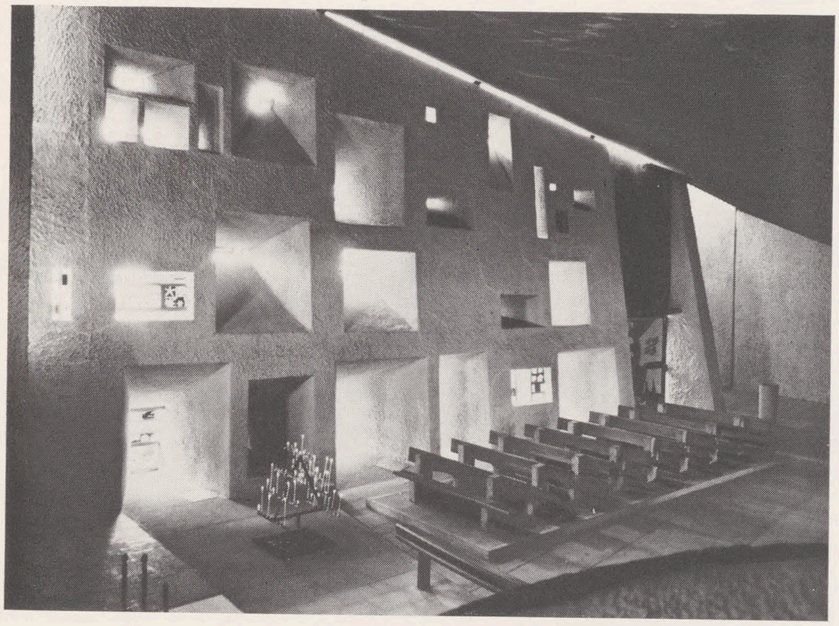
By the play of proportions
by the play of relationships
unexpected, amazing.

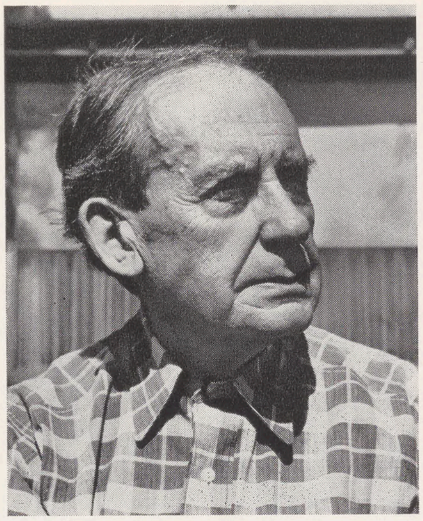
But also by the intellectual play
of purpose:
their authentic origin,
their capacity to endure,
structure,
astuteness, boldness, even temerity, the play
of those vital abstractions which are the
essential qualities
the components of architecture.

L-C









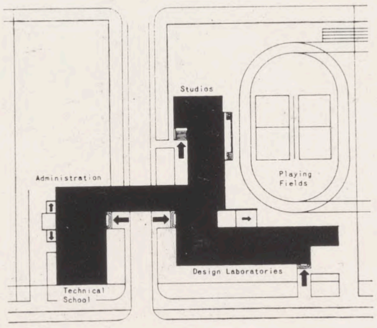
WALTER GROPIUS

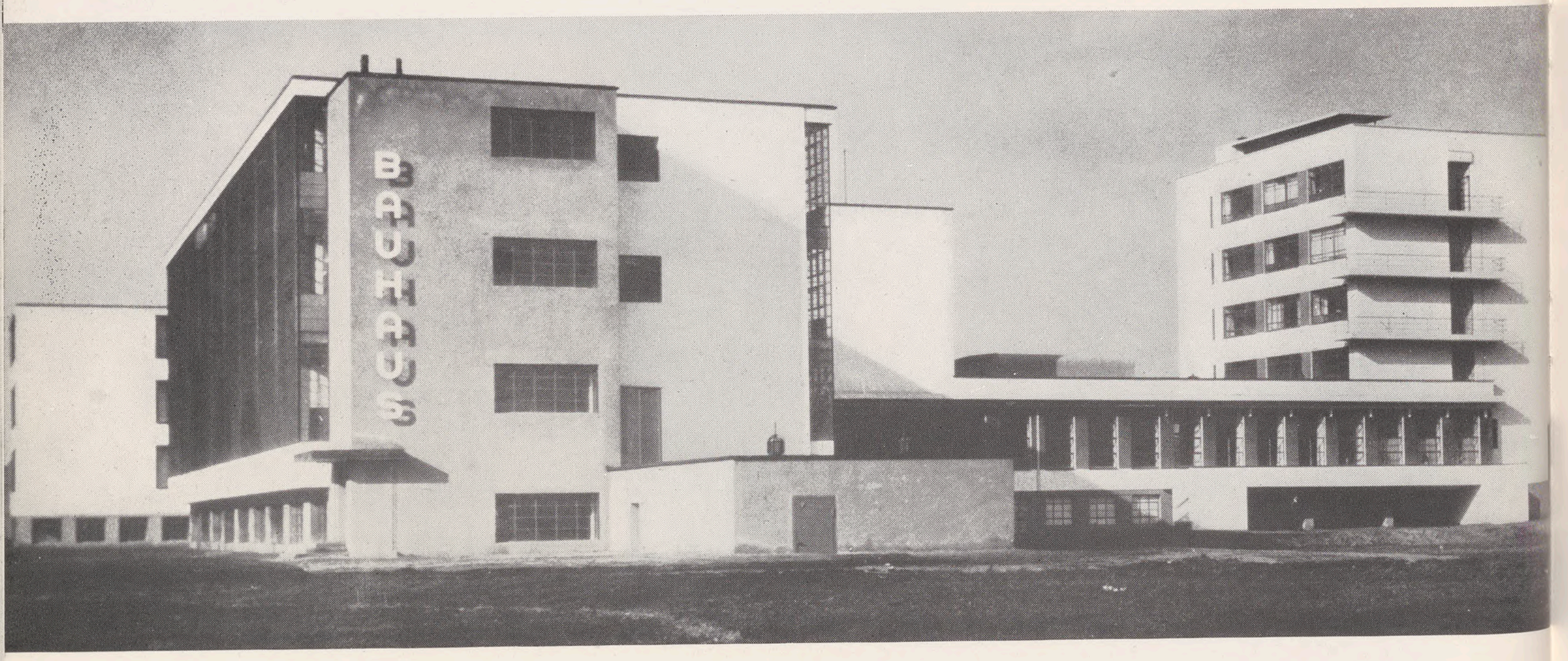
born May 18, 1883, Berlin, Germany

Following his schooling in Berlin and Munich, Walter Gropius joined the office of Peter Behrens, Berlin, where he worked with both Mies van der Rohe and Le Corbusier. As early as 1909 he became absorbed in the possibilities of prefabrication of construction elements, a continuing concern to this day. In 1911, with Adolf Meyer, Gropius completed his first notable structure, the Fagus Factory, near Alfeld, Germany, which made dramatic use of suspended glass curtain walls.

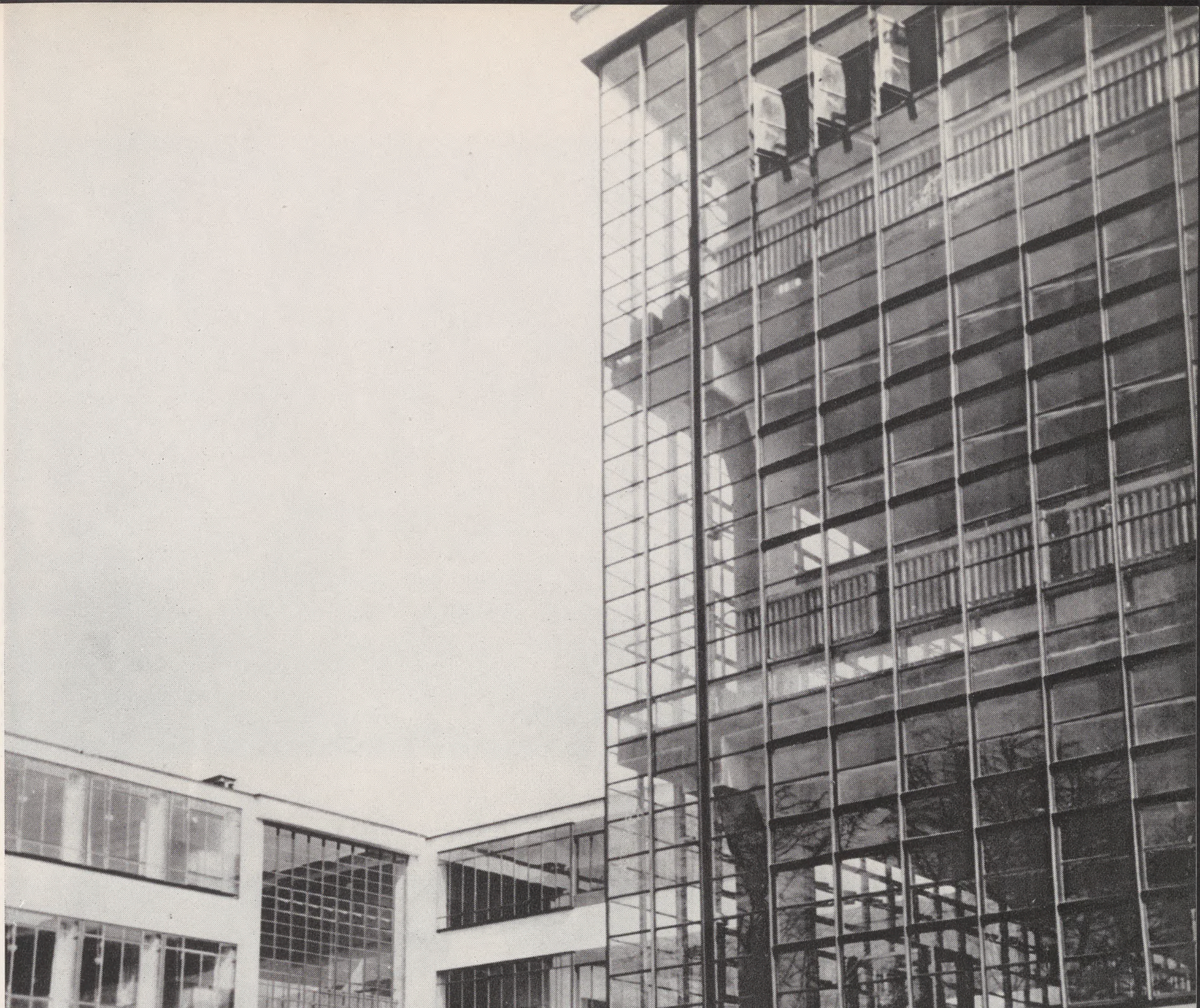
Gropius' fame as an organizer, teacher and method giver began in 1919 when he founded the Bauhaus, an amalgamation of the School of Arts and Crafts and the Academy of Arts, Weimar. Aimed at making a synthesis of arts and technology applicable to the machine age, the Bauhaus was a dynamic center of design, pioneering many of the forms recognized as "modern" today. Gropius' own contribution to Bauhaus architecture is most concretely seen in his Bauhaus buildings (1926), in which he organized a complex with such logic that its function and structure are as apparent outside as within.

Called to become chairman of Harvard's School of Architecture in 1937, Gropius ushered in a revolution of U.S. teaching methods and concepts. He is the recipient this year of the Gold Medal of the American Institute of Architects, that organization's highest award. A strong believer in teamwork, he now heads The Architects Collaborative, with which he designed the Harvard Graduate Center (1949), and is now completing the U.S. Embassy, Athens, as well as drawing up the master plan for the University of Baghdad.

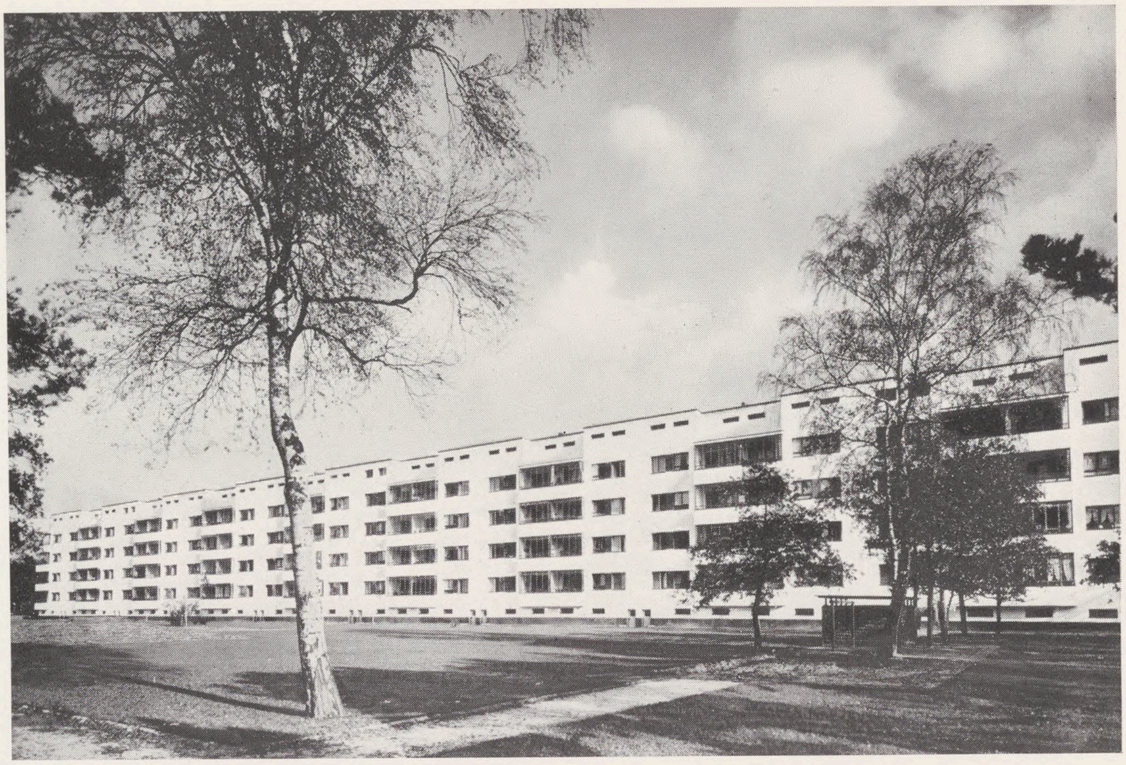




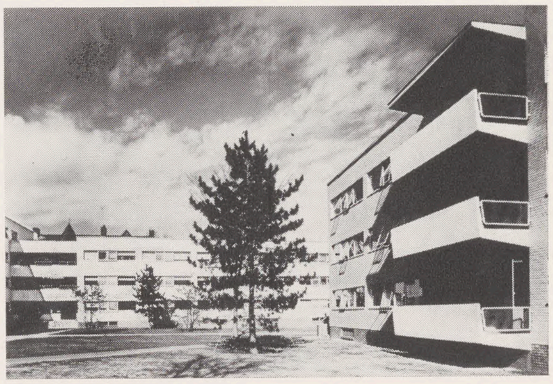
Bauhaus Building, Dessau, Germany (1926)



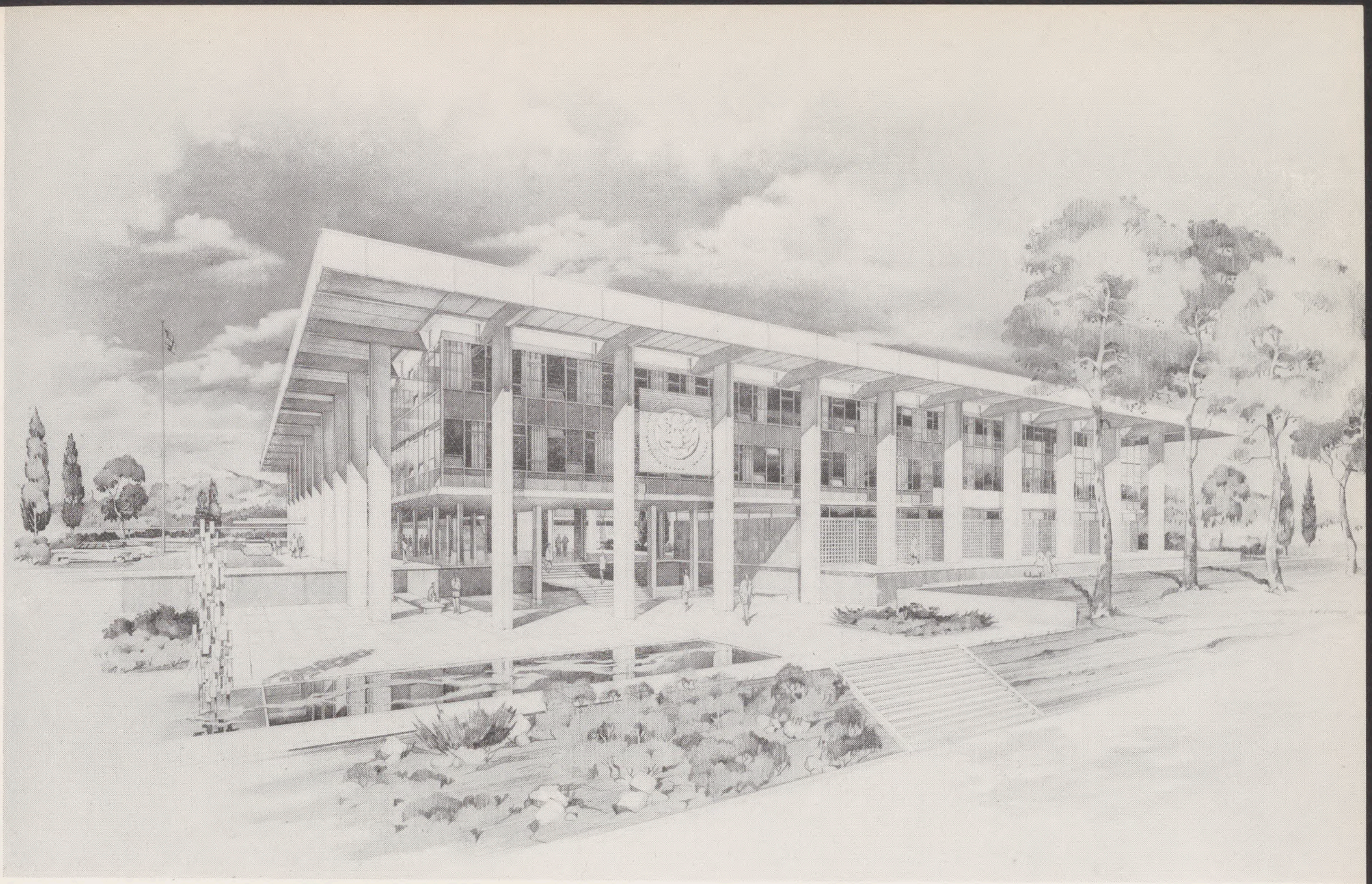
Bauhaus (1926)



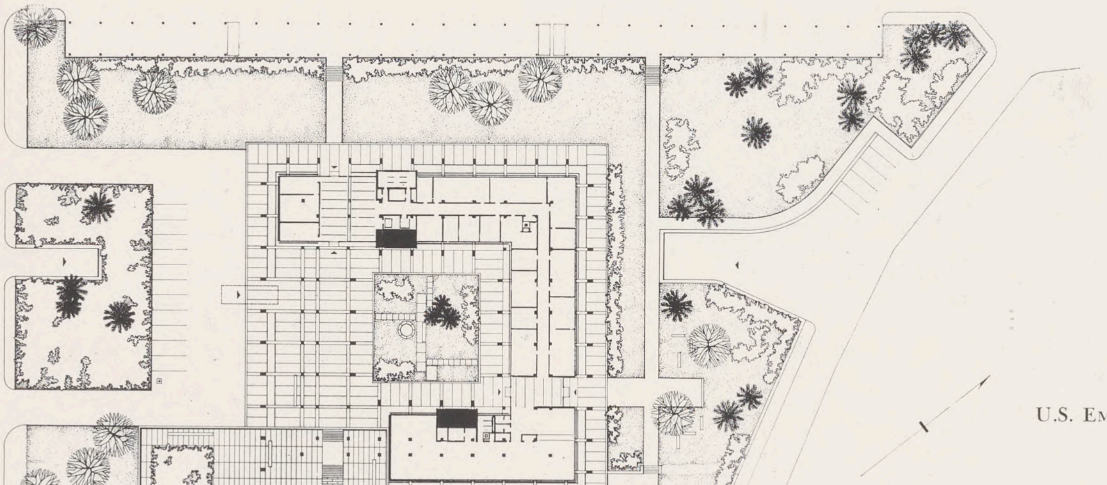
HOUSING, Berlin-Siemensstadt (1929)



HARVARD GRADUATE CENTER (1949)

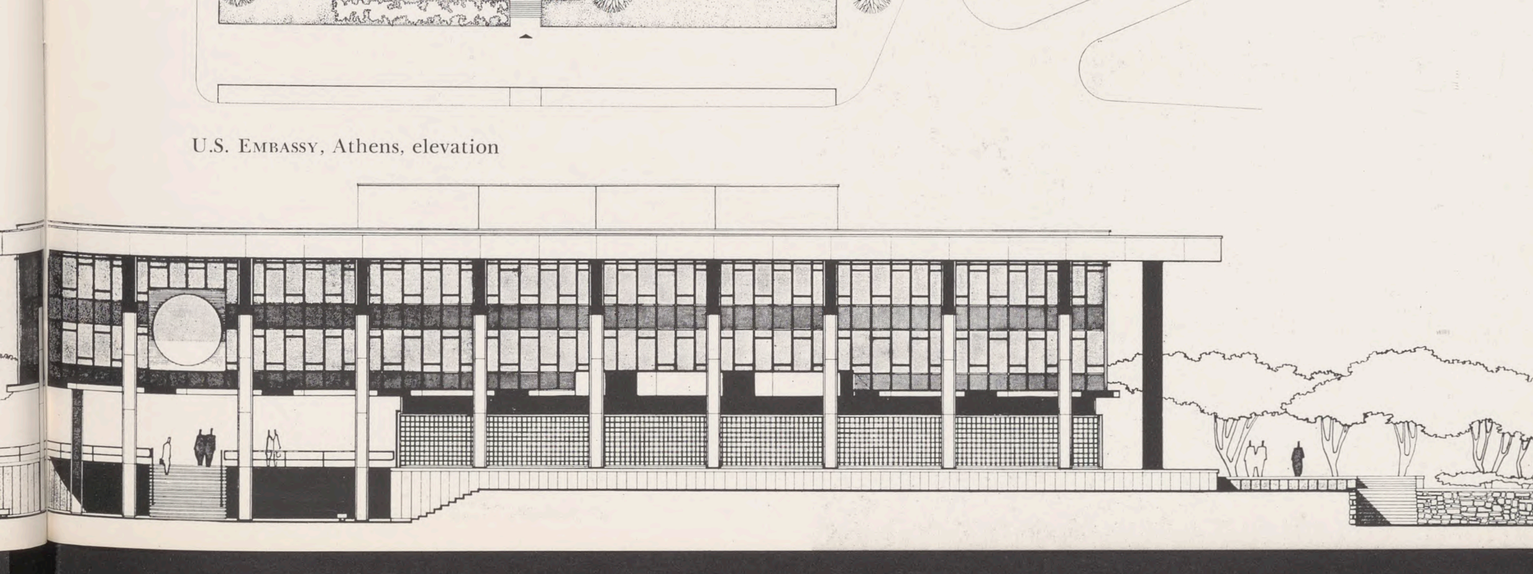


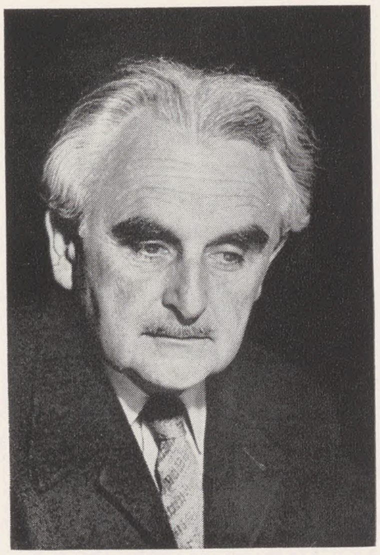
U.S. Embassy, Athens (1960), rendering



U.S. Embassy, Athens, plan

U.S. Embassy, Athens, elevation





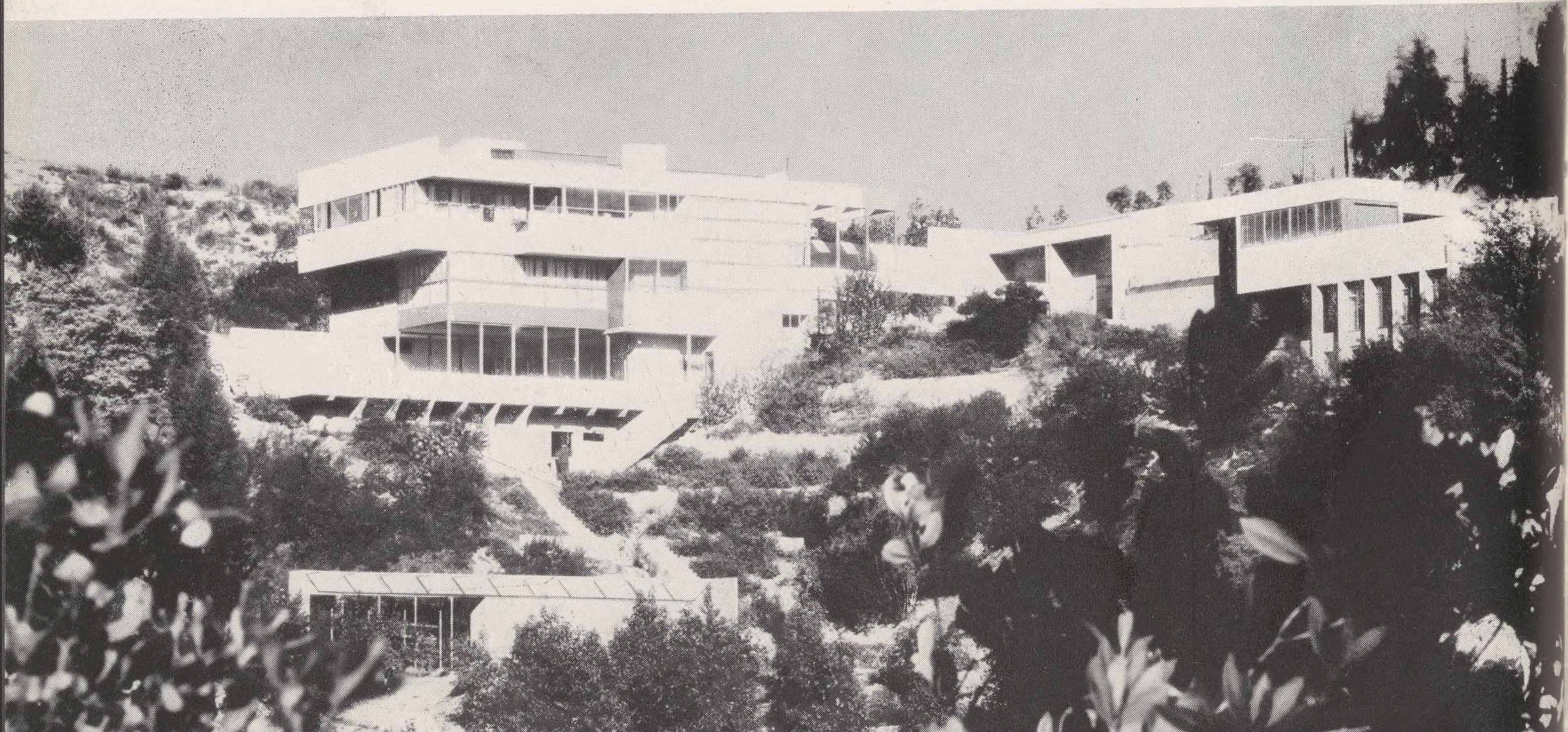
RICHARD J. NEUTRA

born April 8, 1892, Vienna

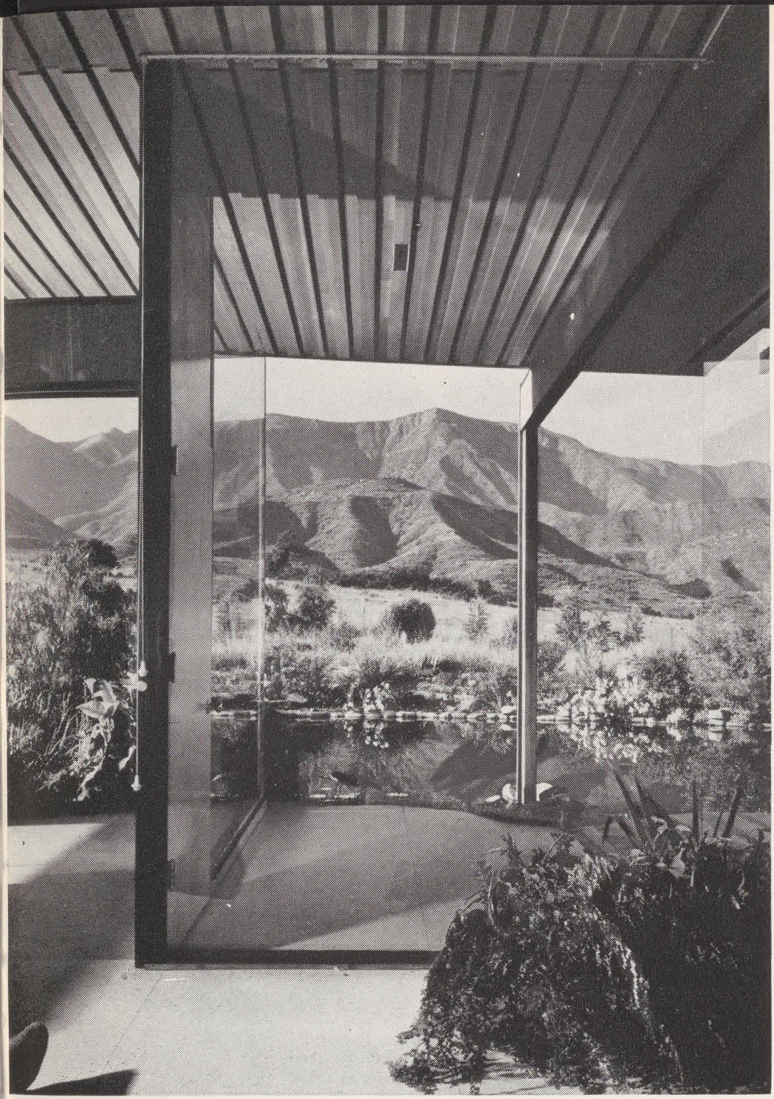
Educated in Vienna and Berlin, Richard J. Neutra began practice as a city planner in Austria, later shared an office with Erich Mendelsohn in Berlin. Arriving in the U.S. in 1923, Neutra first studied with Frank Lloyd Wright at Taliesin East, thus becoming one of the few architects of the 1920s with firsthand knowledge of the leading founding figures of modern architecture in both Europe and the U.S. Neutra's concern with human scale and with the precise adjustments necessary to suit habitat to psychological needs of 20th century man has made him a key philosopher in the study of human environment as it affects architecture.

"Health House," designed for Dr. P. M. Lovell in 1927, brought into relationship such elements of outdoor living as a swimming pool, sleeping porches and open-air fireplace within a hillside structure with a superb view overlooking the Pacific.

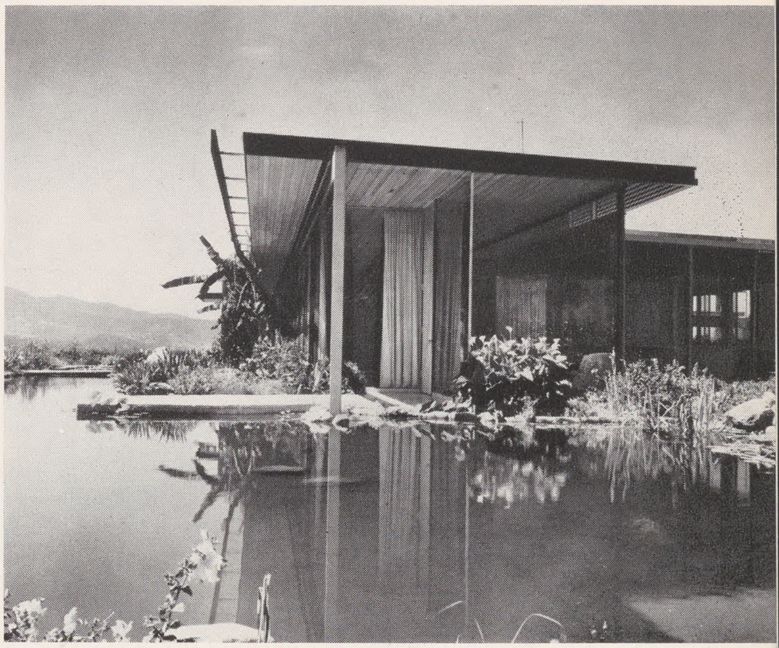
"Rush City Reformed" was the title for Neutra's continuing studies to reform the traffic-choked city, and extended his concern for human habitat to a total concept. Neutra's ideal in housing, as seen in his desert houses and most recently in the house for Mr. and Mrs. John Rados, San Pedro, Calif., continues to be a delicately modulated relationship between interior and exterior space, between the precision of machine-made elements and the free forms of nature.



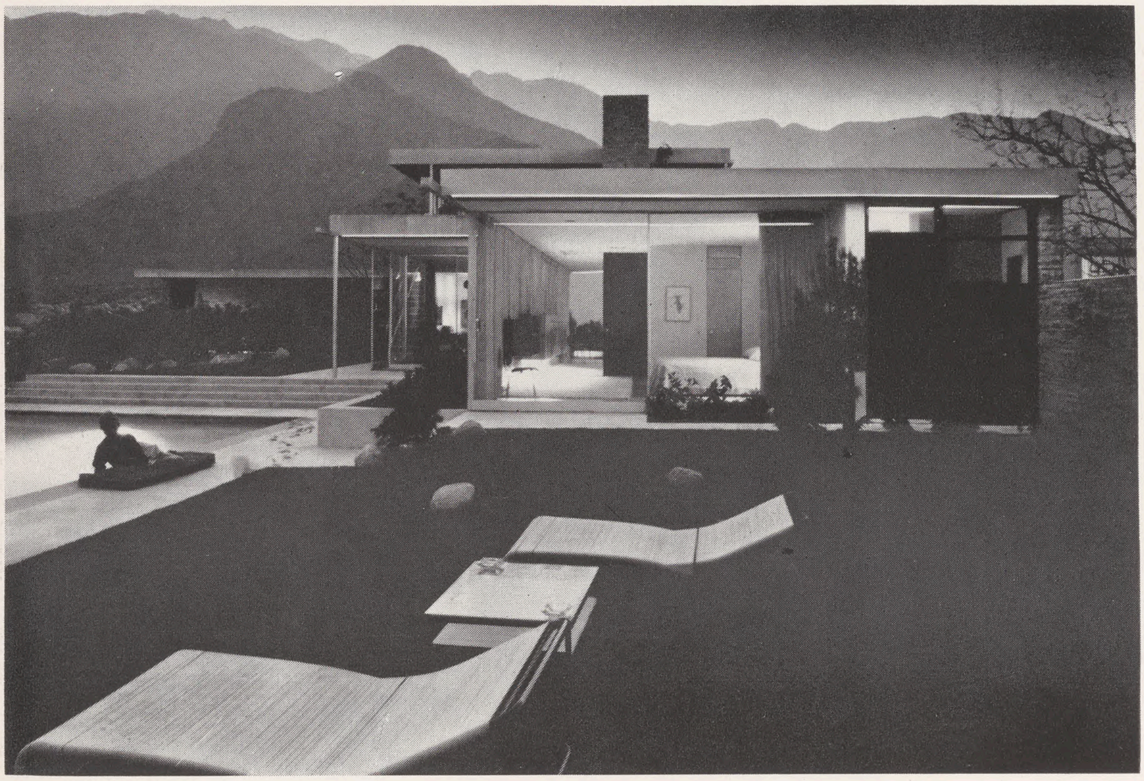
Dr. P. M. Lovell "Health House," Griffith Park, Los Angeles (1927)

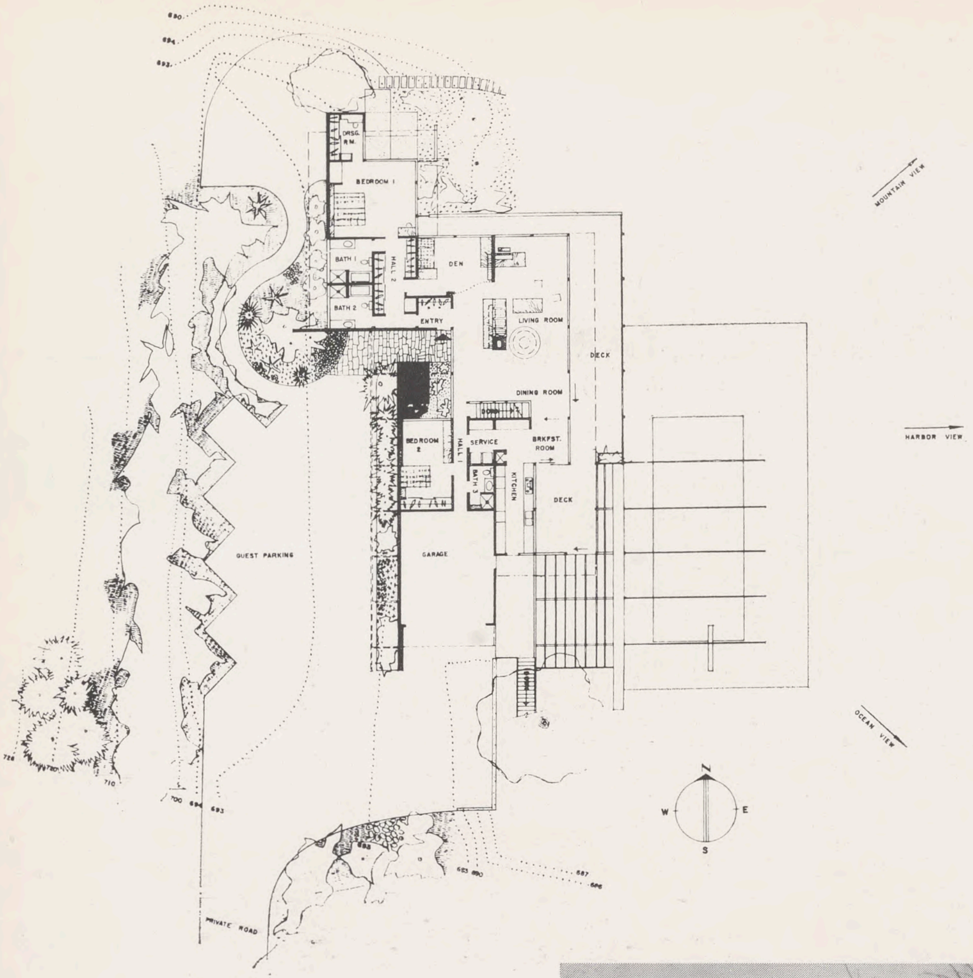


Mr. and Mrs. James Moore House,
Ojai, Calif. (1950)



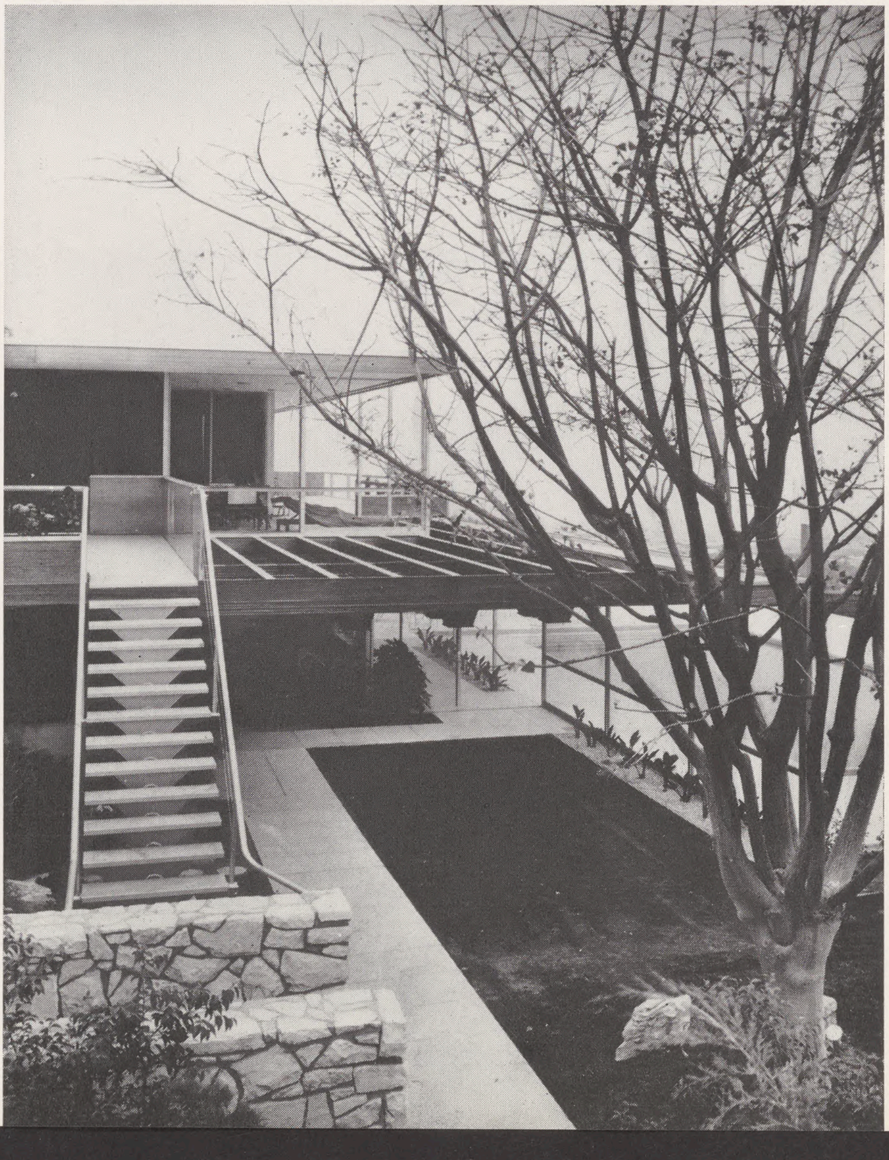
Grace H. Kaufmann House, Palm Springs, Calif. (1946)

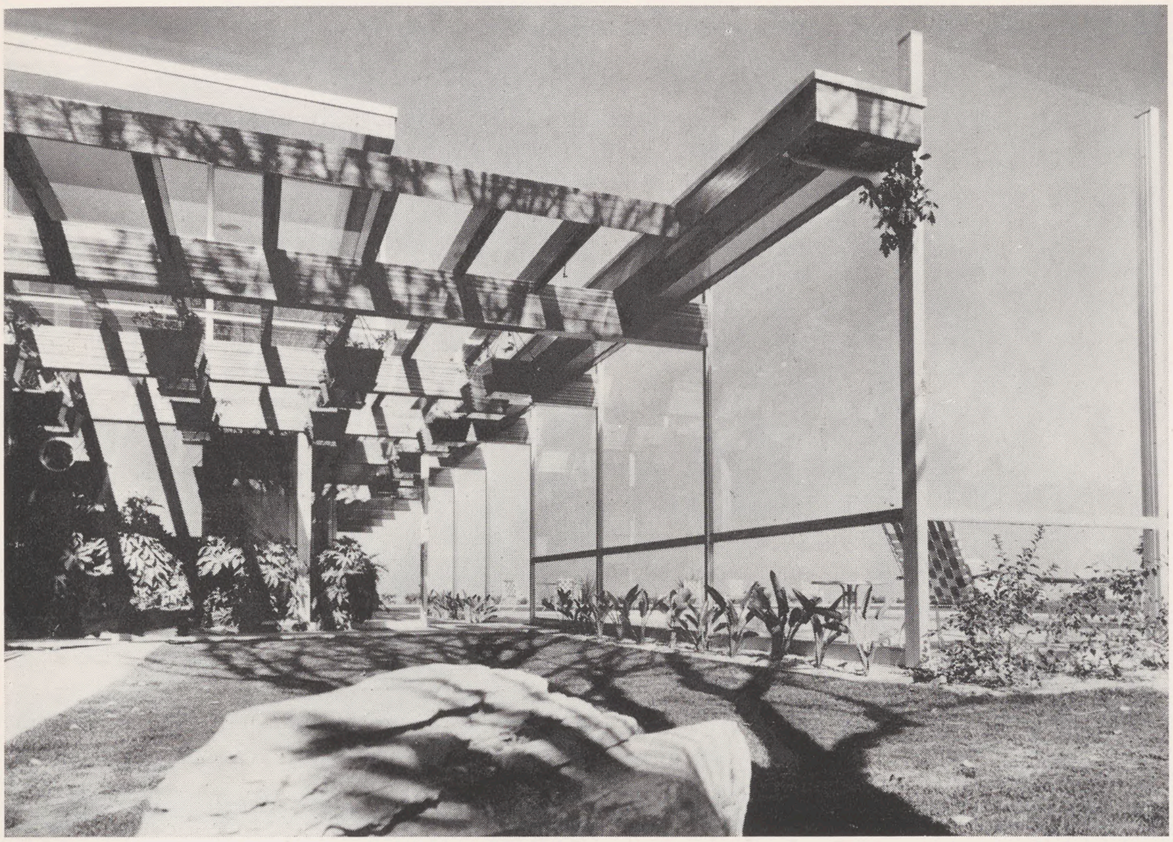




Mr. and Mrs. John Rados House (1958)
San Pedro, Calif.

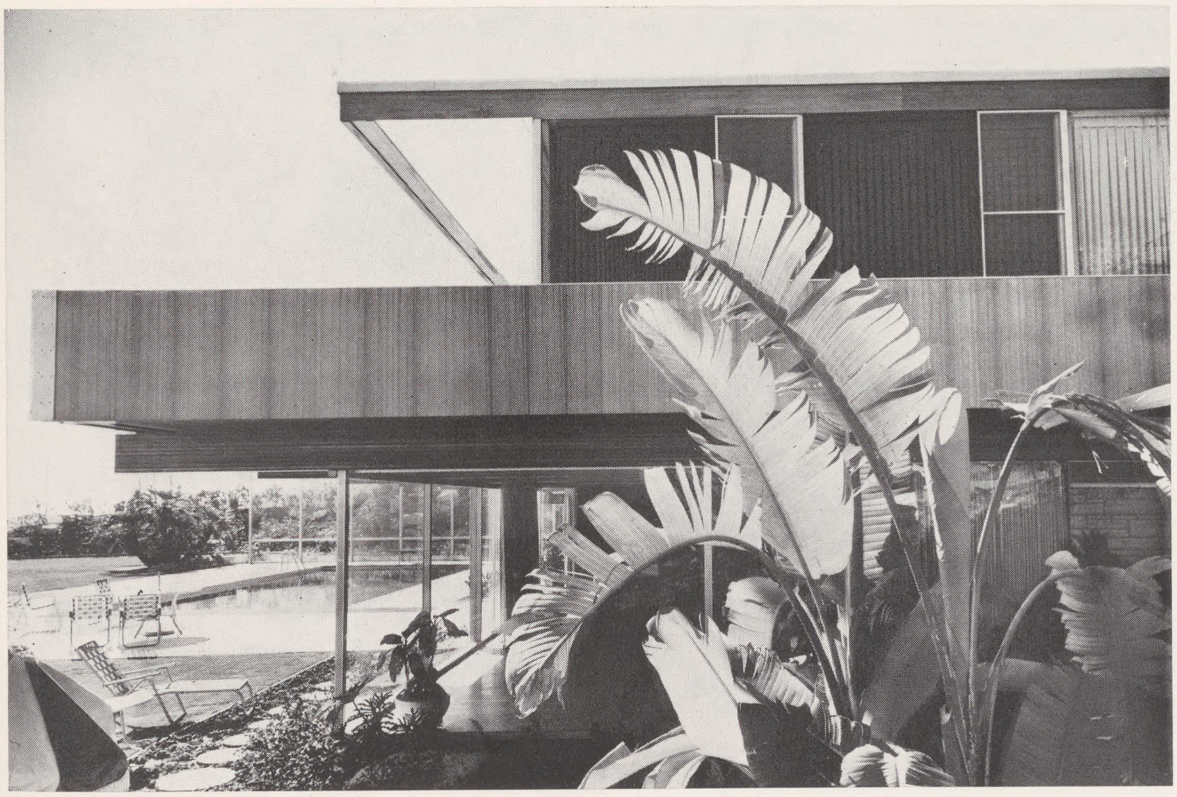
The family dwelling for John Rados serves three generations, numerous grandchildren included. It is the house of a shipbuilder, and the architect has taken studious advantage of the skills which are available to this specific client. Neat metalwork, from stainless steel to anodized aluminum, sea-resistant varnished laminated beams and other fabricated supplies for shipbuilding have been incorporated into the design.





Rados House: arbor and swimming pool (right)

Cantilevered living room deck, overlooking pool



ALVAR AALTO

born Feb. 3, 1898, Kuortane, Finland

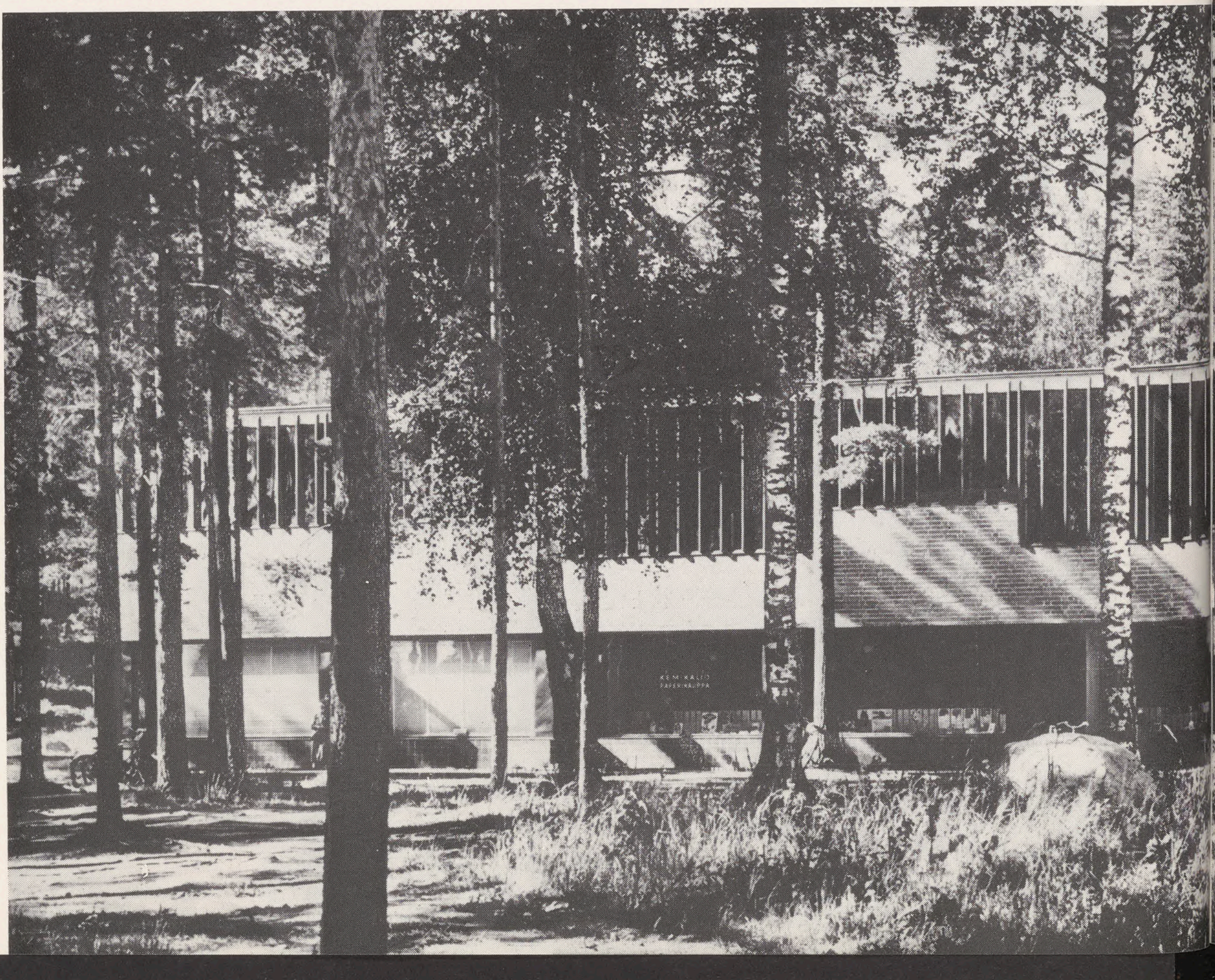
The leading architect of Finland today, Alvar Aalto was an important pioneer in modern architecture. His Tuberculosis Sanatorium, Paimio, Finland (1929-33), is an early example of the emerging International Style carried throughout a major structure. Equally influential was Aalto's Viipuri Library (1927-34), destroyed in World War II, which introduced, among other design elements, the undulating ceiling. This is both reminiscent of the free forms found in the work of such artists as Brancusi and Miró and air views of Aalto's own native lakes.

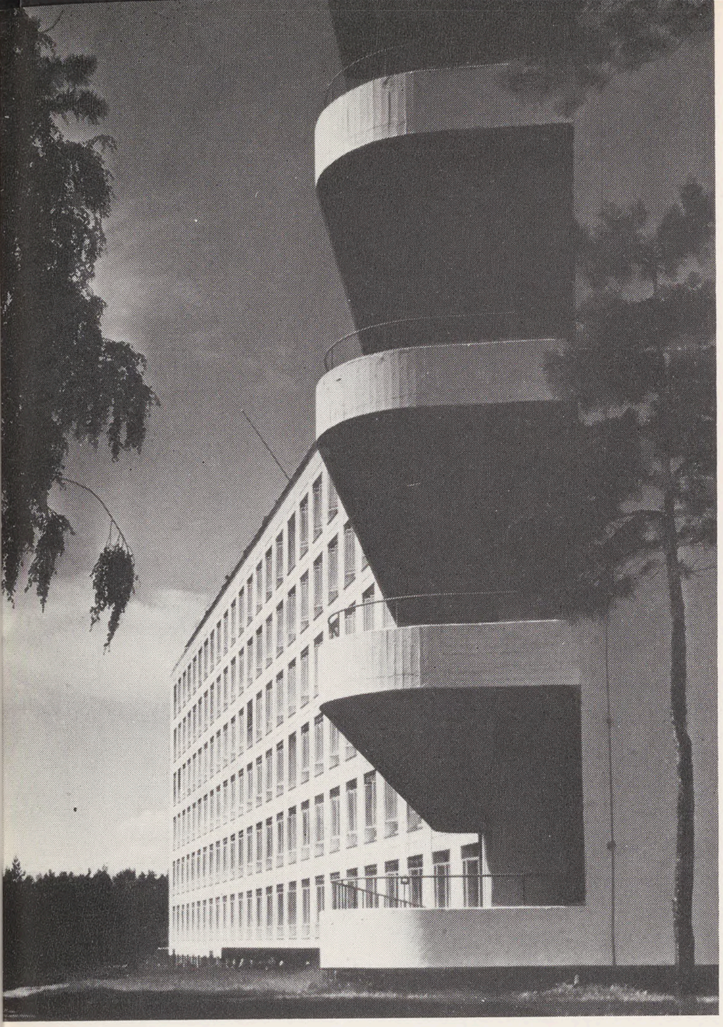
Continuous form was also employed by Aalto in his furniture, which used laminated wood and was widely influential in the U.S.

Aalto's sensitivity to native materials—primarily wood and brick—as well as his firm humanistic stance, has been a necessary antidote to the impersonal, overly machined and antiseptic nature of much early modern architecture. In Aalto's opinion, "Architecture—the real thing—is only to be found when man stands in the center. His tragedy and comedy—both."

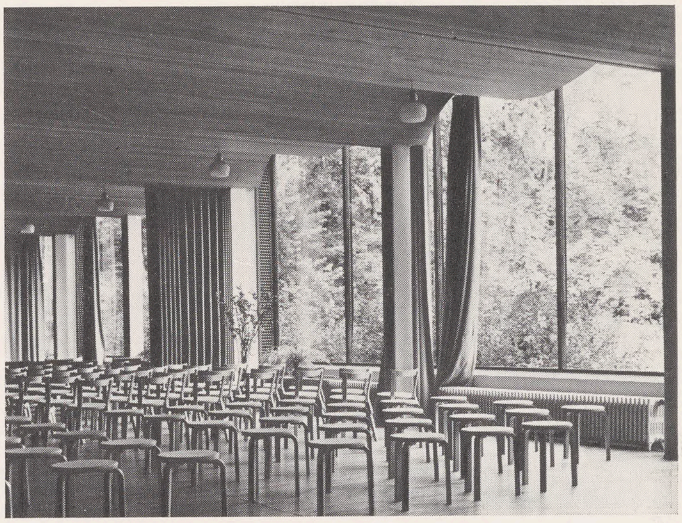
Aalto's best-known work in the U.S., apart from his Finnish Pavilion, New York World's Fair (1939), is Baker House dormitory, Massachusetts Institute of Technology. The curved façade in irregular brick gains additional windows for students' rooms overlooking the Charles River Basin; the brick used on the interior gives a rough rather monastic atmosphere Aalto feels is proper for a great technological institution.

Town Hall, Säynätsalo, Finland (1953)

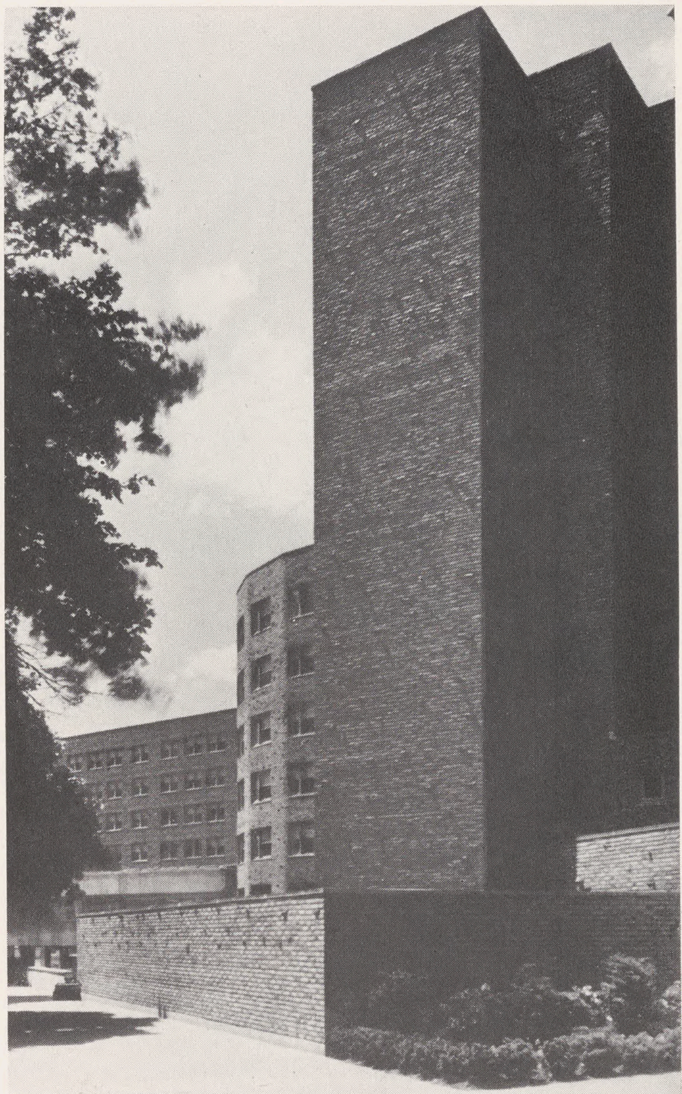




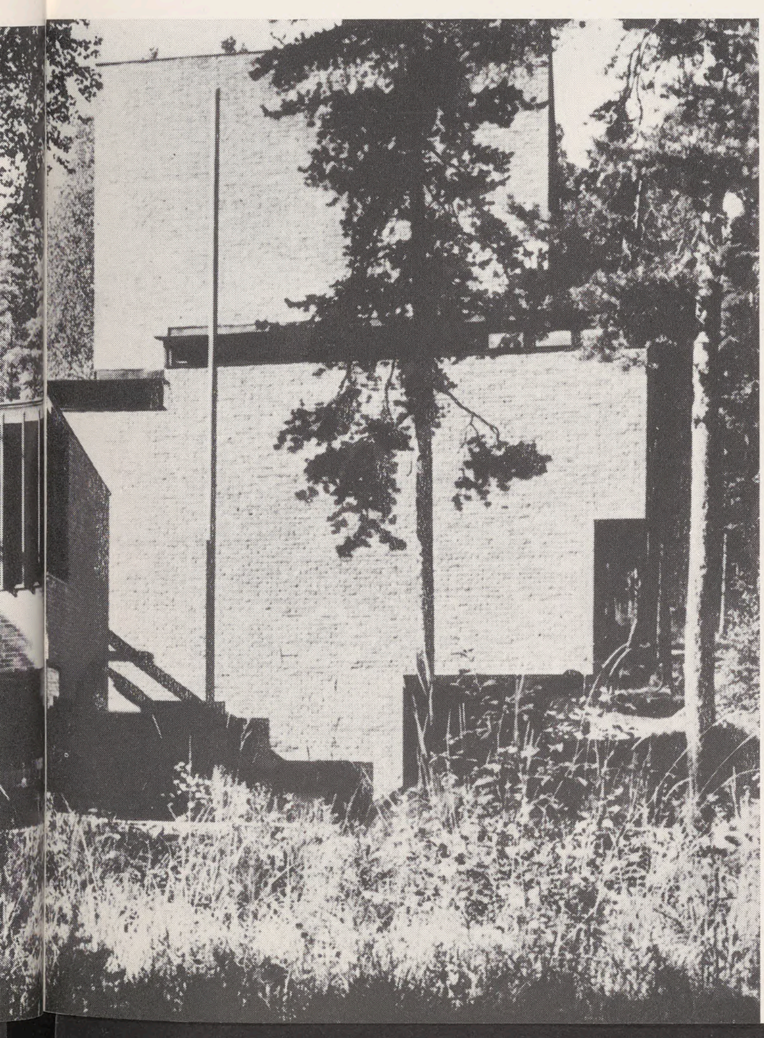
SANATORIUM, Paimio, Finland (1929-33)



VIIPURI LIBRARY, Finland (1927-34), destroyed in World War II



EVERETT MOORE BAKER HOUSE,
Massachusetts Institute of Technology (1947-49)



MARCEL BREUER

born May 21, 1902, Pecs, Hungary

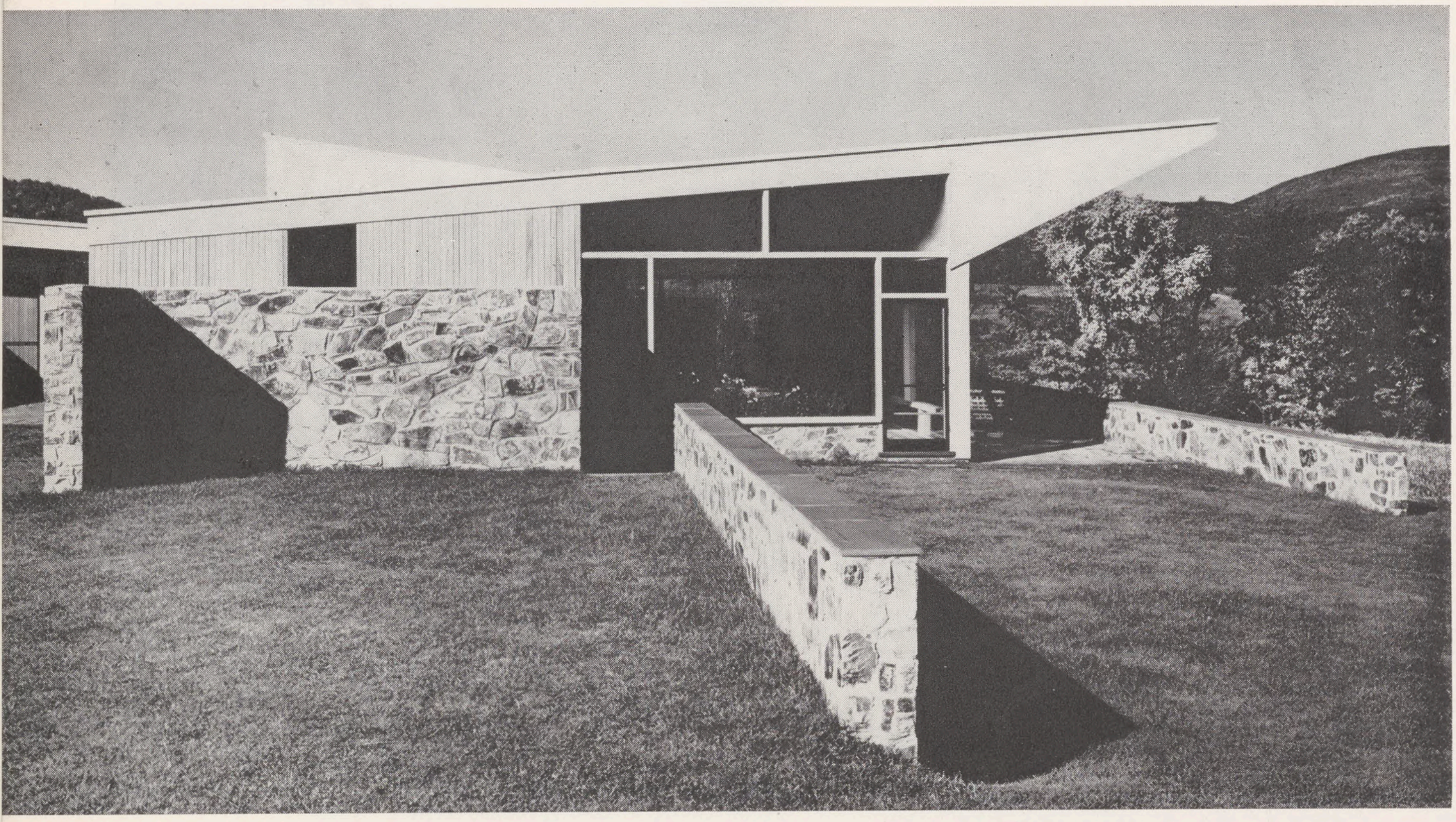
Outstanding among the young men of great talent who flocked to the Bauhaus in the early 1920s, Marcel Breuer was first a furniture designer, creating in 1925 at the age of 23 the first tubular steel chair. He increasingly turned his interests to architecture, moved to England when Hitler came to power, and in 1937 was invited by Walter Gropius to come to Harvard. During his partnership with Gropius (1937-41), Breuer adapted Bauhaus principles to American conditions to create several of the most pleasing houses and summer cottages on the contemporary scene.

The Robinson House, Williamstown, Mass. (1946), with its butterfly roof, binuclear plan dividing night and day areas, and precise use of fieldstone and vertical wood siding, is an outstanding example of Breuer's contribution to U.S. housing.

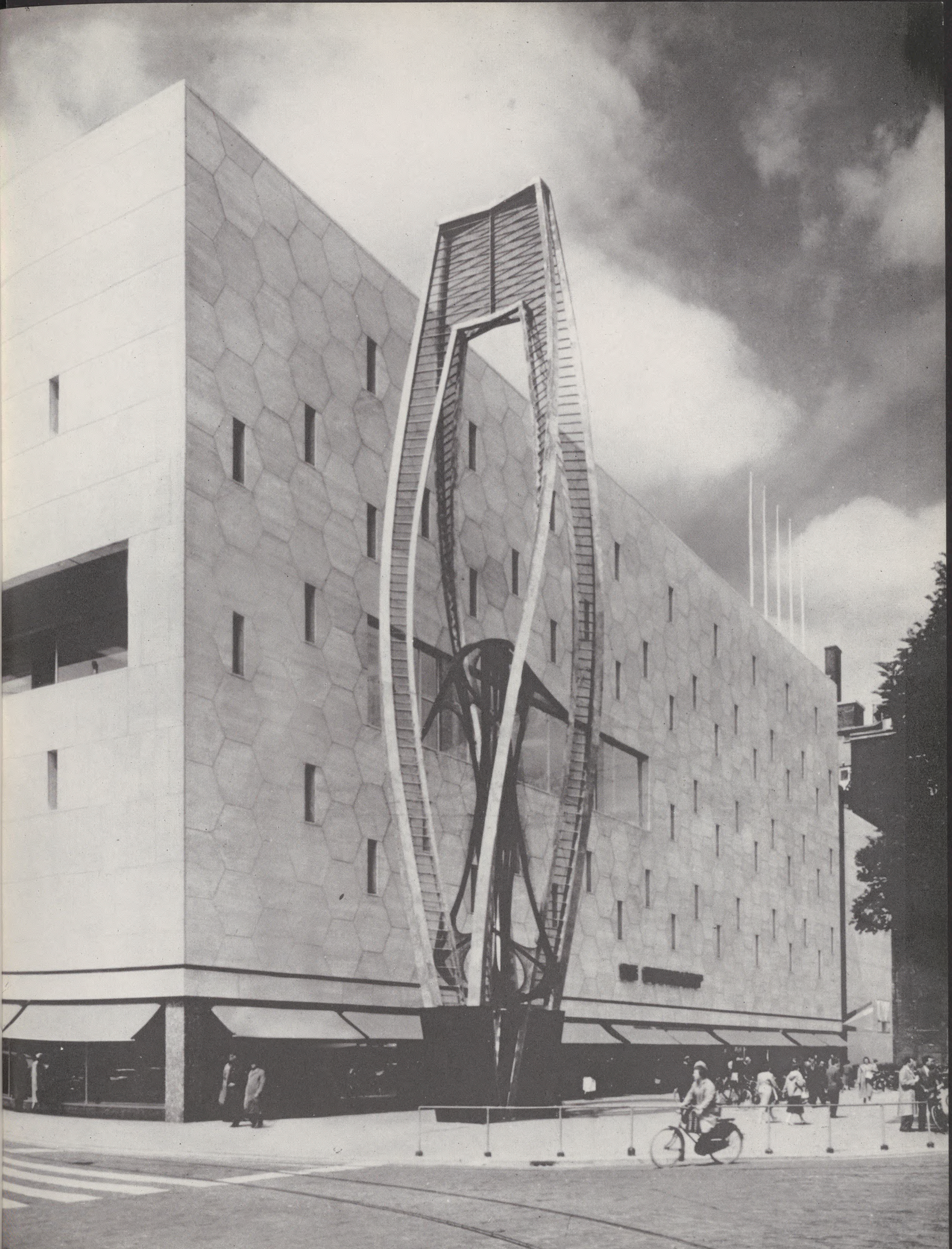
In recent years Breuer has been primarily concerned with large-scale structures both here and abroad. The Bijenkorf department store, Rotterdam (1957), introduces a hung-masonry façade with overall beehive pattern as an antidote to the current overemphasis on glass, and makes dramatic use of an 80-ft.-high, free-standing construction designed by Naum Gabo.

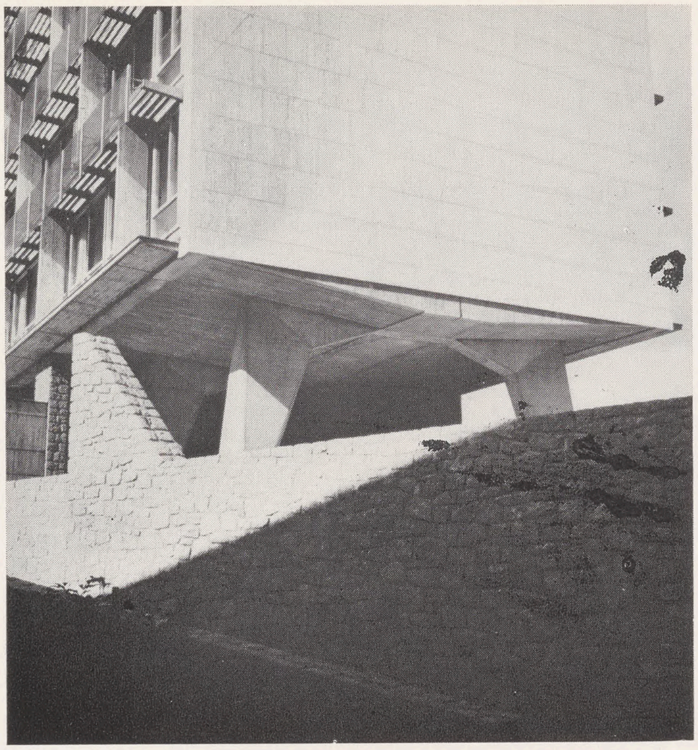
Breuer's culminating work is the UNESCO headquarters, Paris (1958), designed with Italian Engineer Pier Luigi Nervi and French Architect Bernard Zehrfuss.

Robinson House, Williamstown, Mass. (1946)



De Bijenkorf Department Store, Rotterdam, Holland (1957), front façade with 80-ft. construction by Naum Gabo

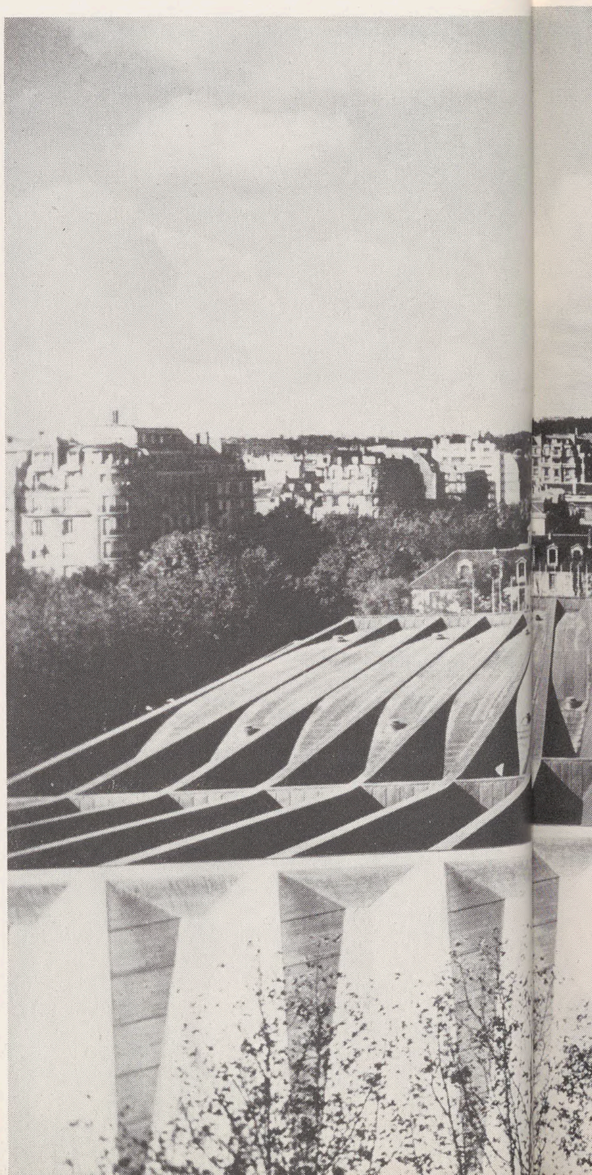




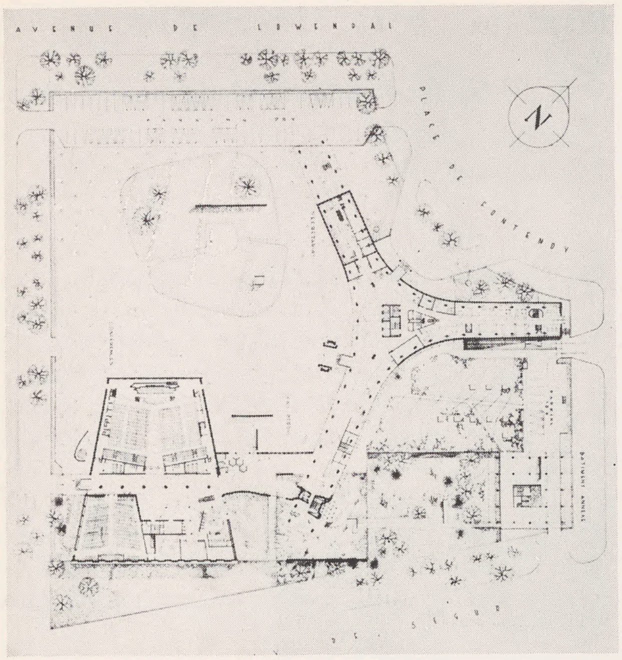
Supporting columns and masonry wall

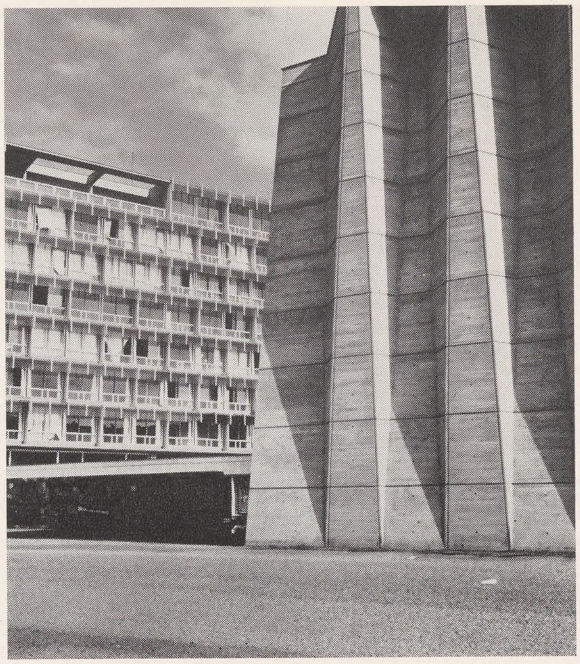
UNITED NATIONS EDUCATIONAL, SCIENTIFIC & CULTURAL ORGANIZATION (UNESCO), 1958
Place de Fontenoy, Paris

Architects: Marcel Breuer (U.S.A.)
Bernard Zehrfuss (France)
Pier Luigi Nervi (Italy)
Advisory Panel: Lucio Costa (Brazil)
Walter Gropius (U.S.A.)
Le Corbusier (France)
Sven Markelius (Sweden)
Ernesto Rogers (Italy)
Consultant: Eero Saarinen (U.S.A.)

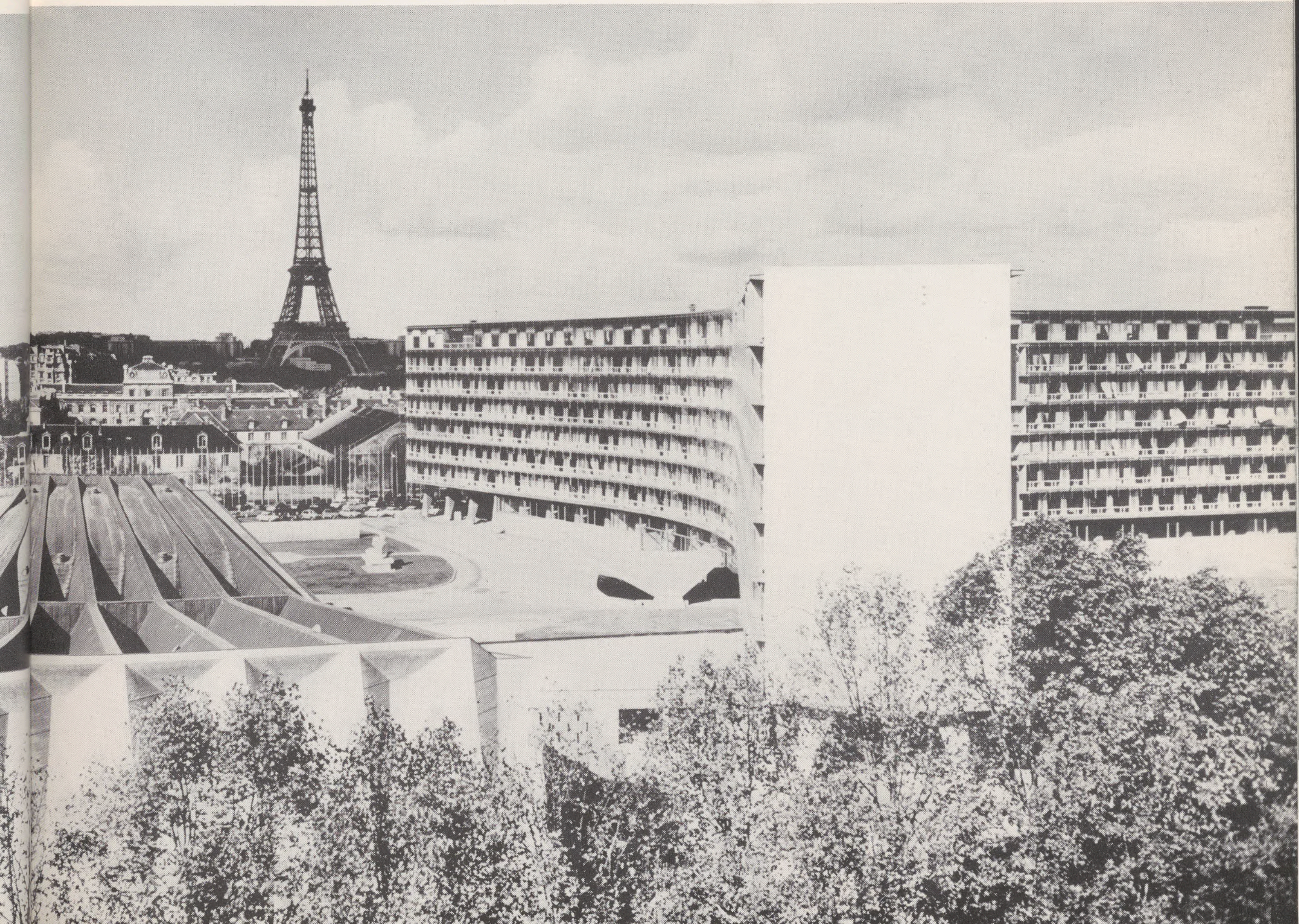


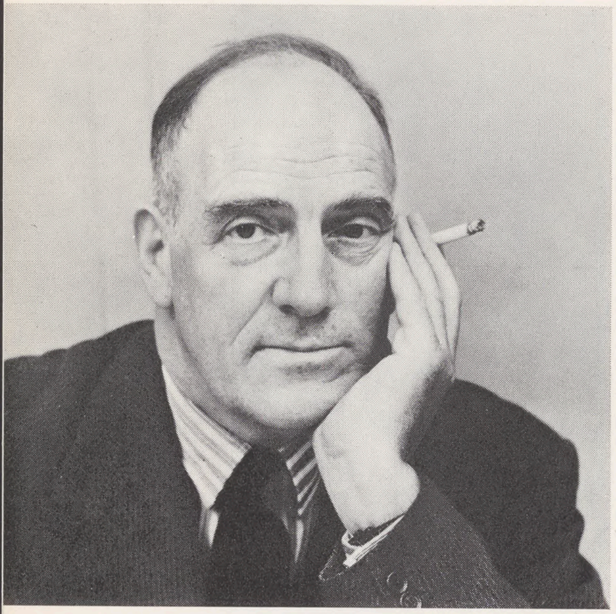
UNESCO SECRETARIAT façade with solar glass and louvers





UNESCO CONFERENCE HALL (right), and façade of Secretariat



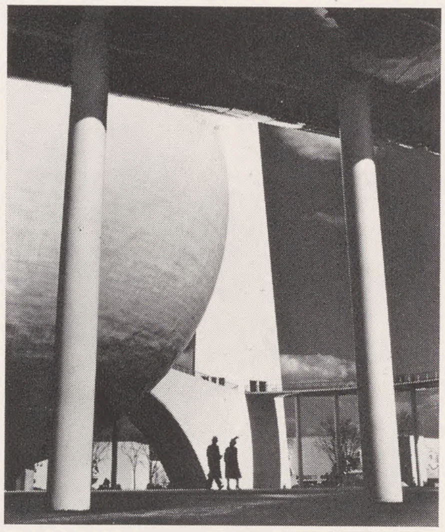


WALLACE K. HARRISON

born Sept. 28, 1895, Worcester, Massachusetts

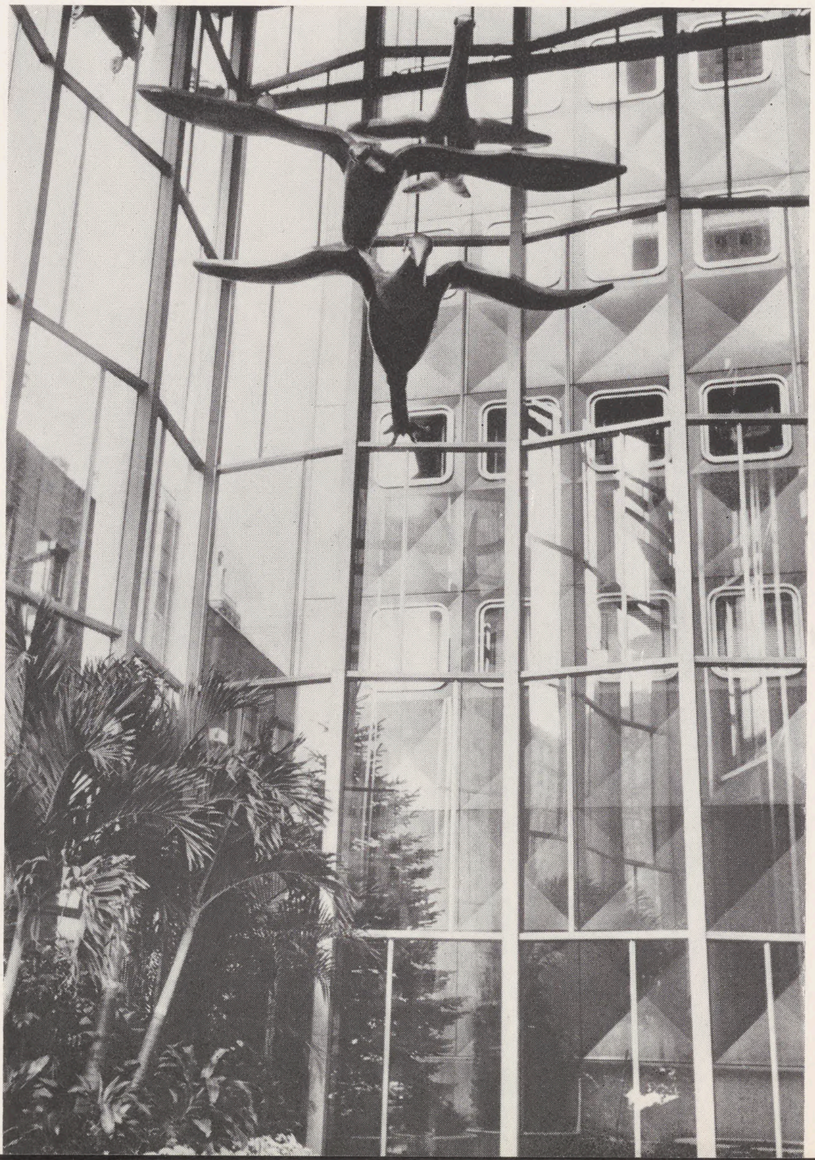
One of the great organizers and team leaders in the complex business of modern building, Wallace K. Harrison has been an important figure in the three major Manhattan architectural projects of the past three decades: as one of the architects designing Rockefeller Center, as director of planning for the United Nations Secretariat, and currently as coordinating architect for the Lincoln Center for the Performing Arts.

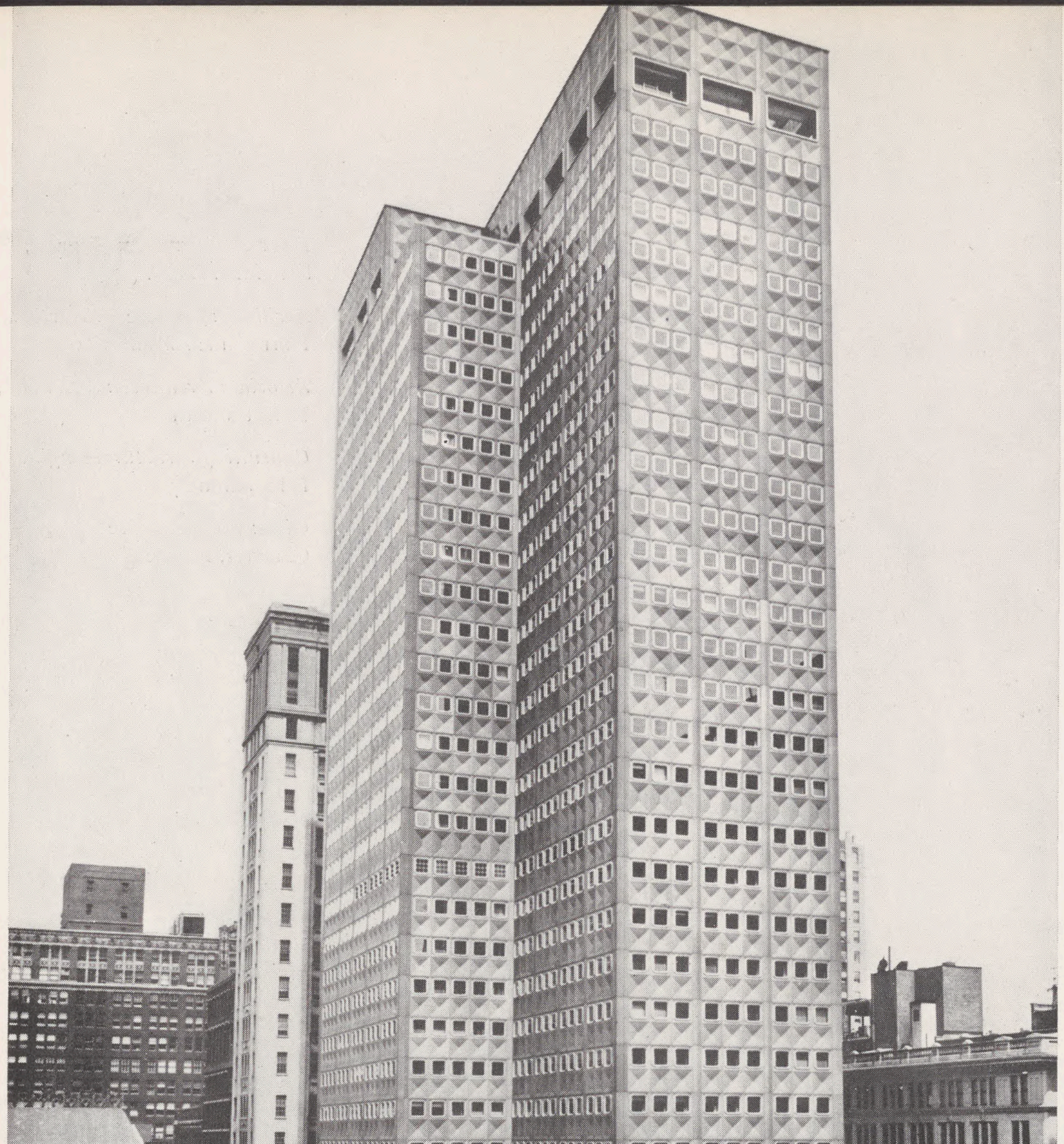
Willing to experiment with bold solutions, Harrison designed the Trylon & Perisphere for the 1939 New York World's Fair, pioneered the use of aluminum panels as curtain walls, and has consistently made use of modern engineering while insisting on the rightful place of the arts in architecture.



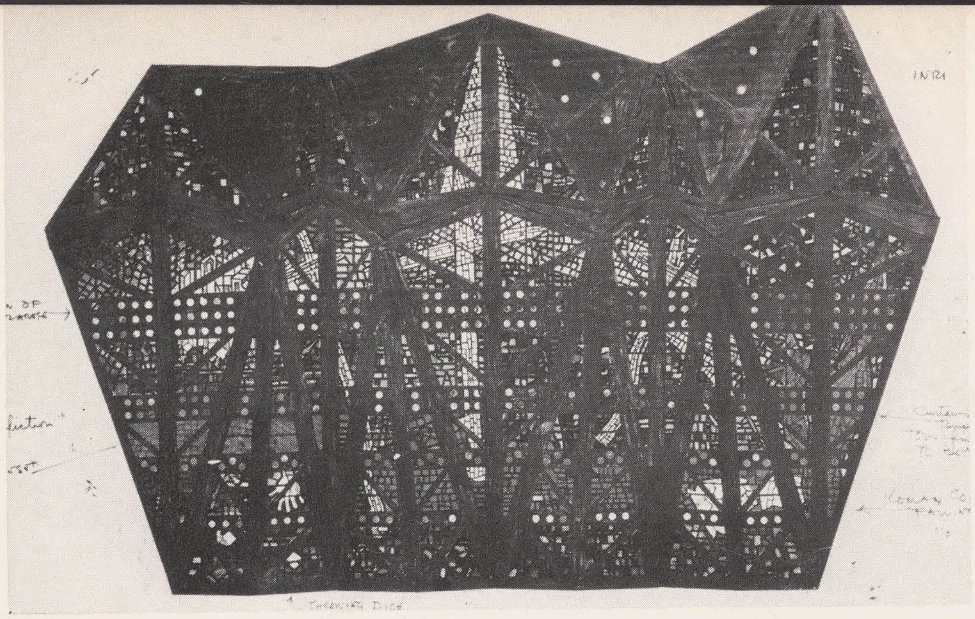
Trylon & Perisphere, New York World's Fair (with Andre Fouilhoux)

ALCOA Building, Pittsburgh, Pa. (1953), lobby suspended from main building





ALCOA BUILDING, Pittsburgh, Pa. (1953)



First Presbyterian Church,
Stamford, Conn. (1958)

Architect: Wallace K. Harrison, Harrison & Abramovitz

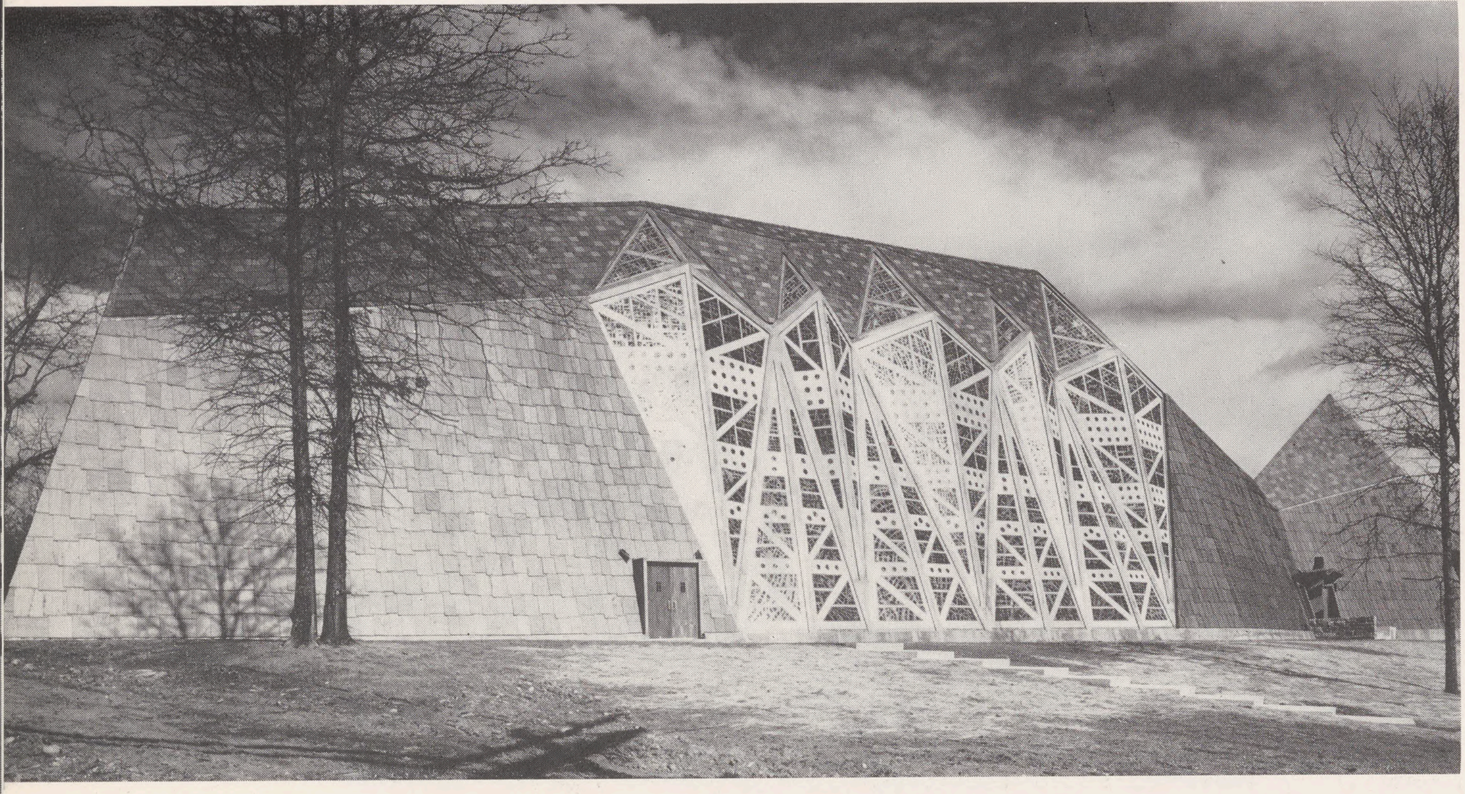
Associate Architects: Sherwood, Mills & Smith

Consulting Structural Engineer: Felix Samuely

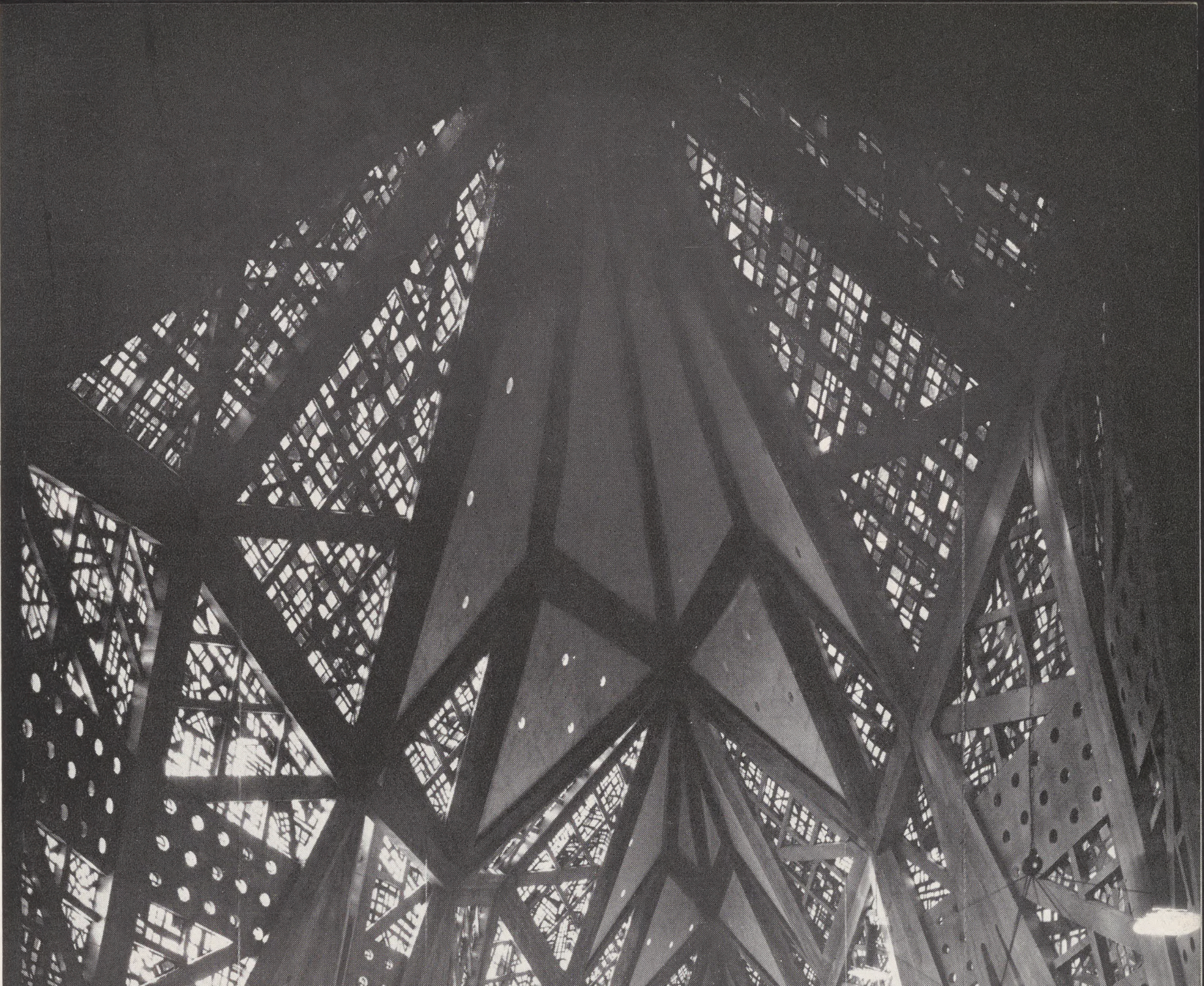
Glass: Gabriel Loire
Chartres, France

Drawing for window by Wallace K. Harrison

Harrison's First Presbyterian Church, Stamford, Conn. (1958), derives its structural form from the use of folded concrete slabs, designed in consultation with English Structural Engineer Felix Samuely. The use of glass, made by Gabriel Loire, Chartres, France, follows Harrison's own design. The architect's desire to use "new materials and new construction methods to create a place of worship with some of the splendor of colored light found in the great Gothic cathedrals" is realized in a memorable church for modern-day worship. Almost by inadvertence it recalls such ancient Christian symbols as the fish (so used by the Greeks because the Greek letters in the word "fish" are the initials for "Jesus Christ, God's Son, Saviour").



First Presbyterian Church, Stamford, Conn., exterior view



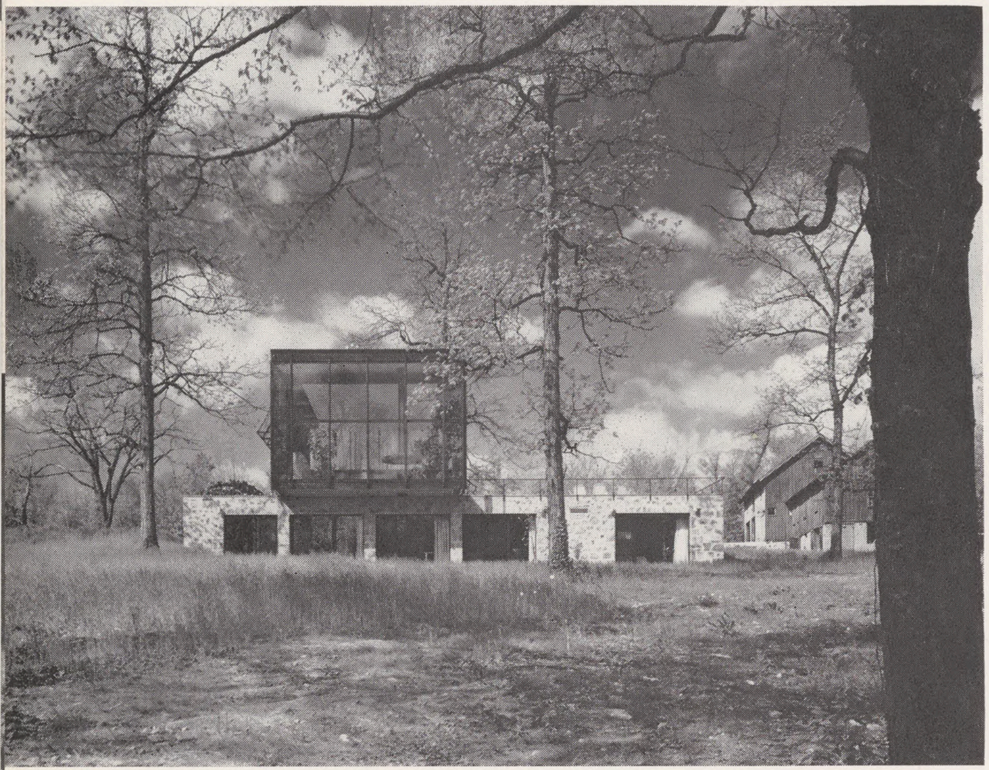
First Presbyterian Church, Stamford, Conn., interior

PHILIP C. JOHNSON

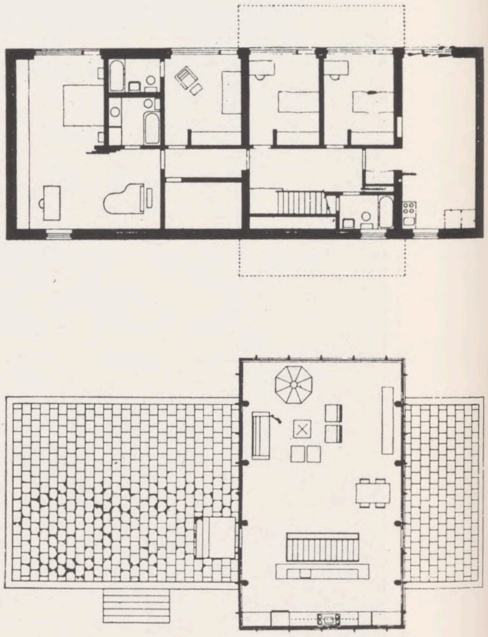
born July 8, 1906, Cleveland, Ohio

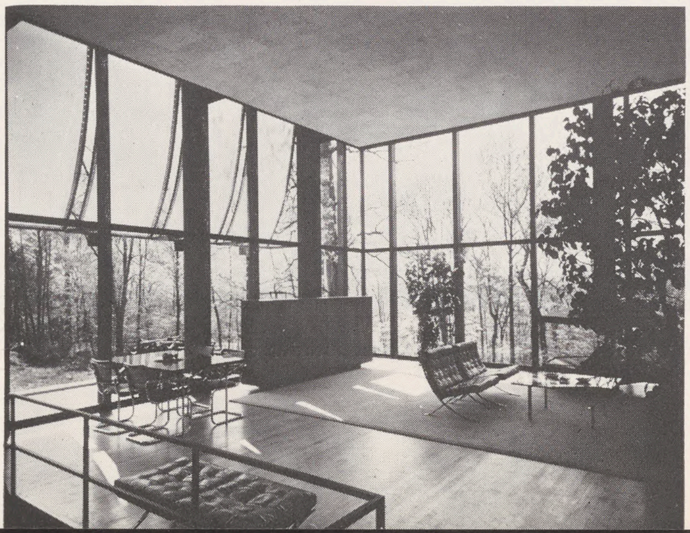
A connoisseur, critic and taste-maker before he became an architect, Philip Johnson, with Henry Russell Hitchcock, staged the first major U.S. exhibition of modern architecture at the Museum of Modern Art in 1932. Graduating from the Harvard Graduate School of Design in 1943, he rapidly established himself as an architect of great taste with his own Glass House, New Canaan, Conn. (1949). Both biographer of and collaborator with Mies van der Rohe (on the Seagram building), Johnson has worked through his own elegant variations of themes first stated by Mies, expanding and refining them in the process.

WILEY HOUSE, New Canaan, Conn. (1953), with family quarters below, glass pavilion above

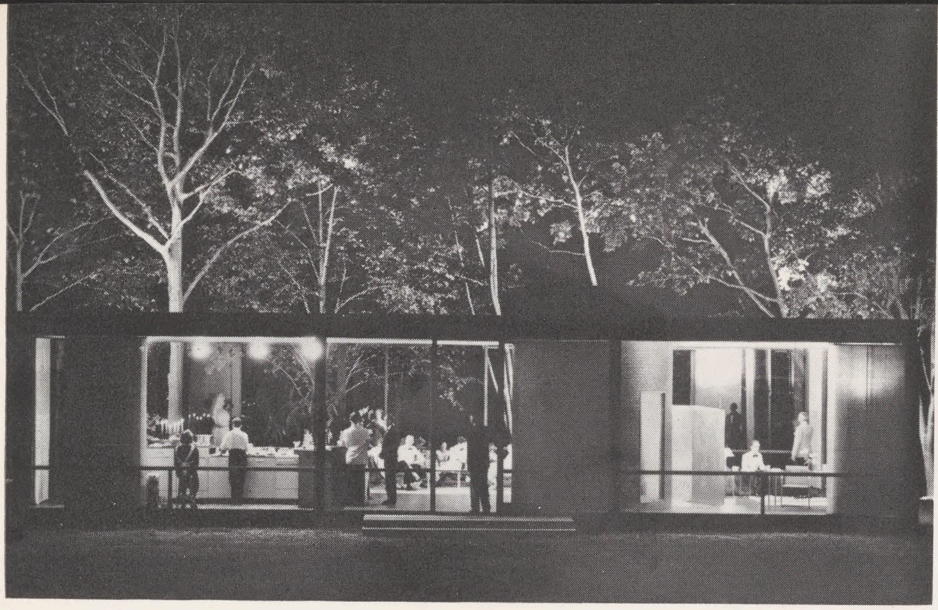


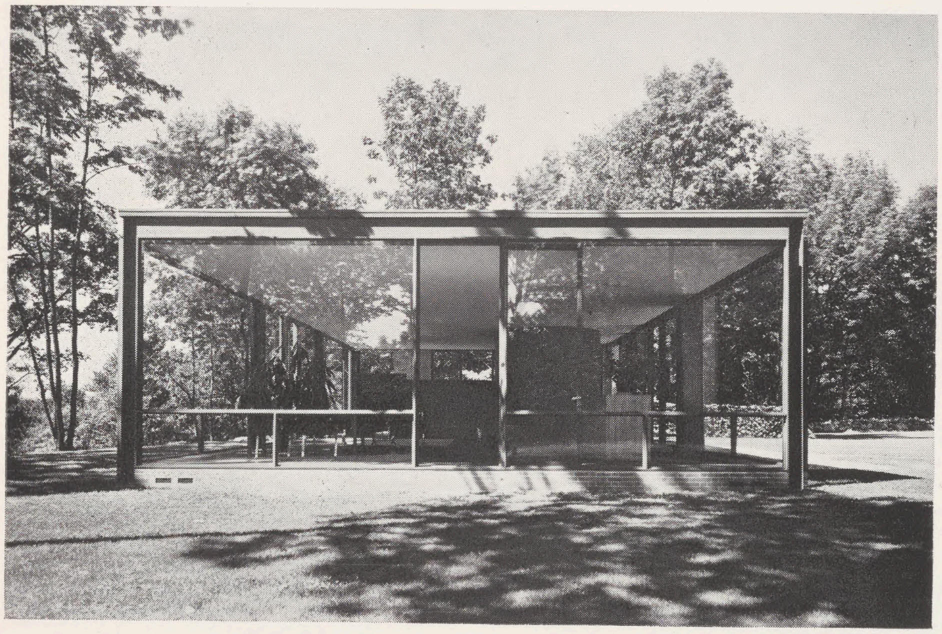
WILEY HOUSE, plan



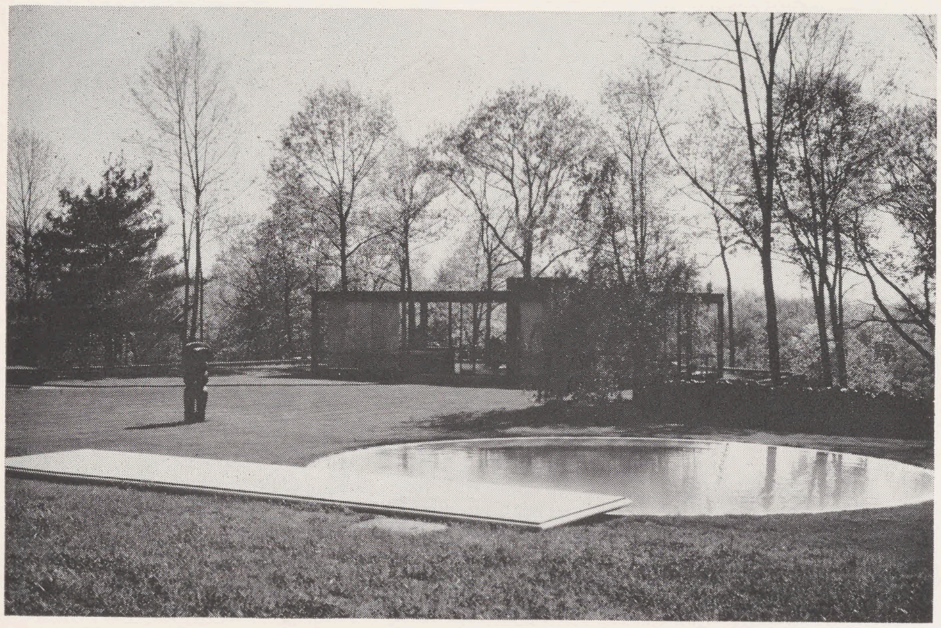


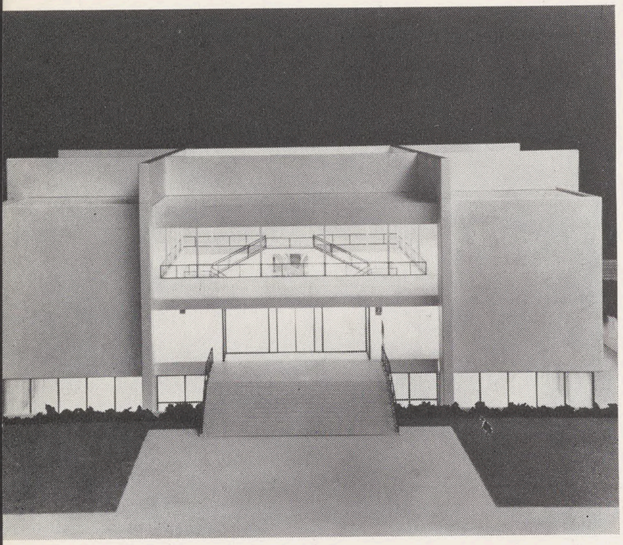
WILEY HOUSE, pavilion floor, interior





Glass House, New Canaan, Conn. (1949)

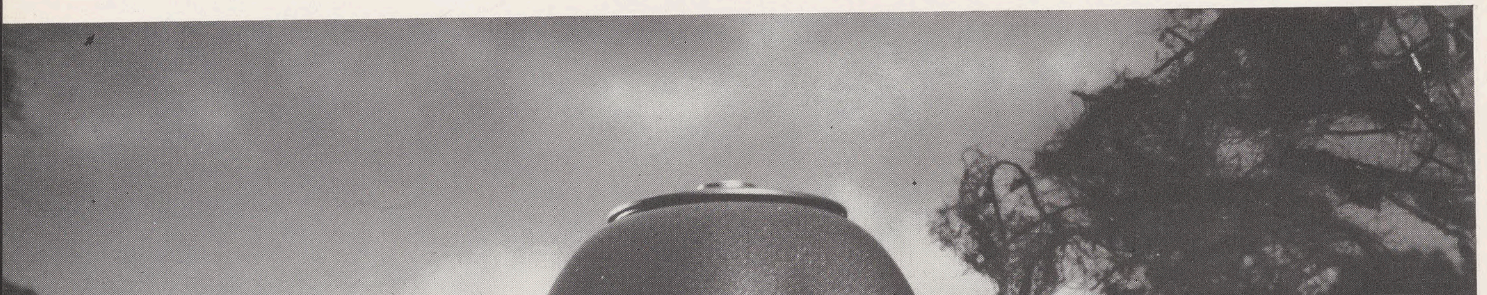




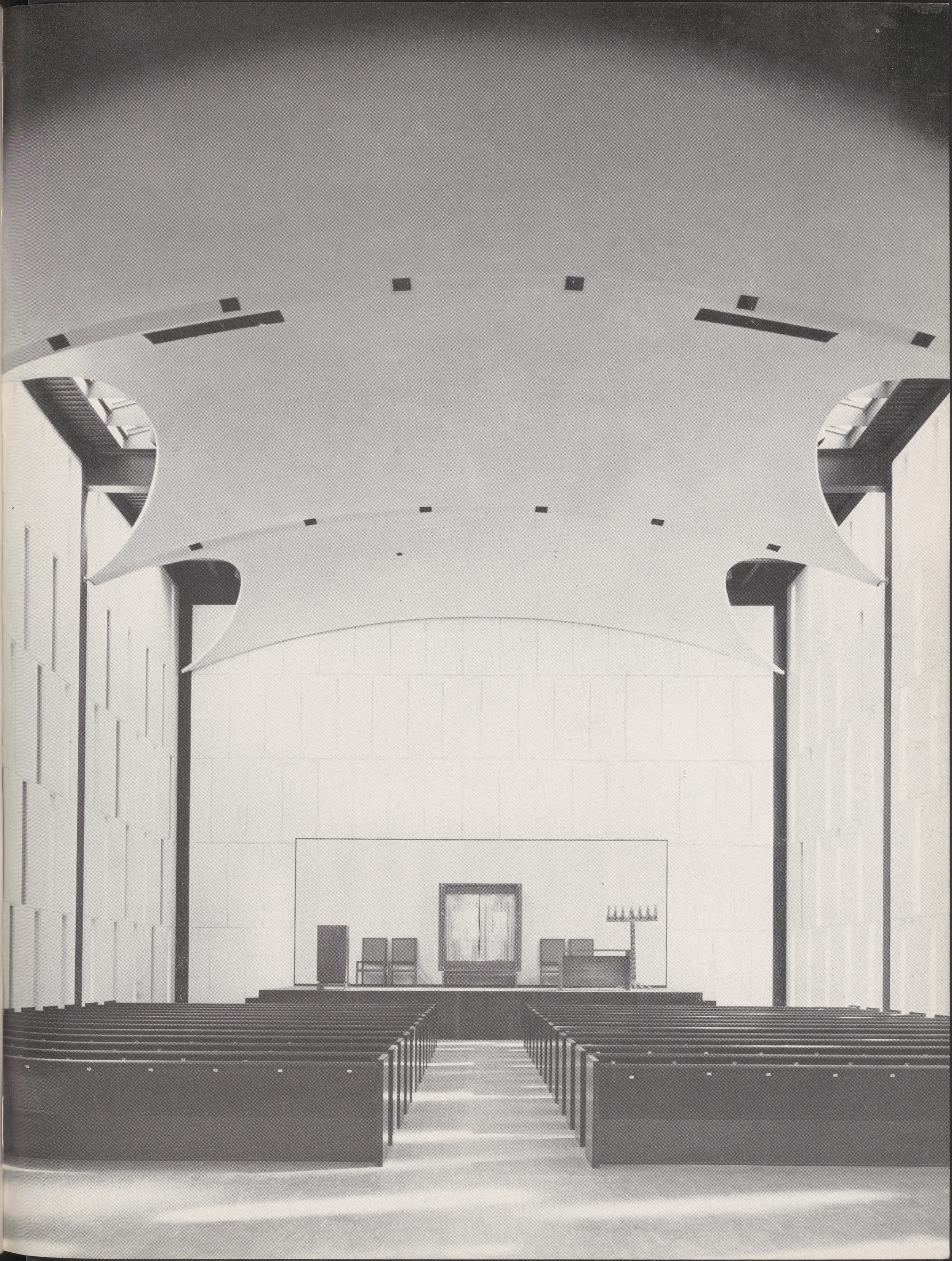
Munson-Williams-Proctor Institute, model of museum (1960)

The design of an interior shell canopy in his own Guest House (1953) announced Johnson's concern with space of classic, almost Palladian, proportions, of which the Temple Kneses Tifereth Israel, Port Chester, N. Y. (1956), is an example. The balanced plan, organized around the center court of the Munson-Williams-Proctor Institute, Utica, N. Y., is equally classic. His design for the New Harmony Shrine, New Harmony, Ind. (which will shelter *The Virgin* by Jacques Lipchitz), ranges even farther afield with its evocation, conscious or not, of ancient Hindu stupas.

New Harmony Shrine, New Harmony, Indiana, model including "Virgin" by Jacques Lipchitz



Kneses Tifereth Israel Synagogue, Port Chester, N. Y. (1956), interior



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SOM

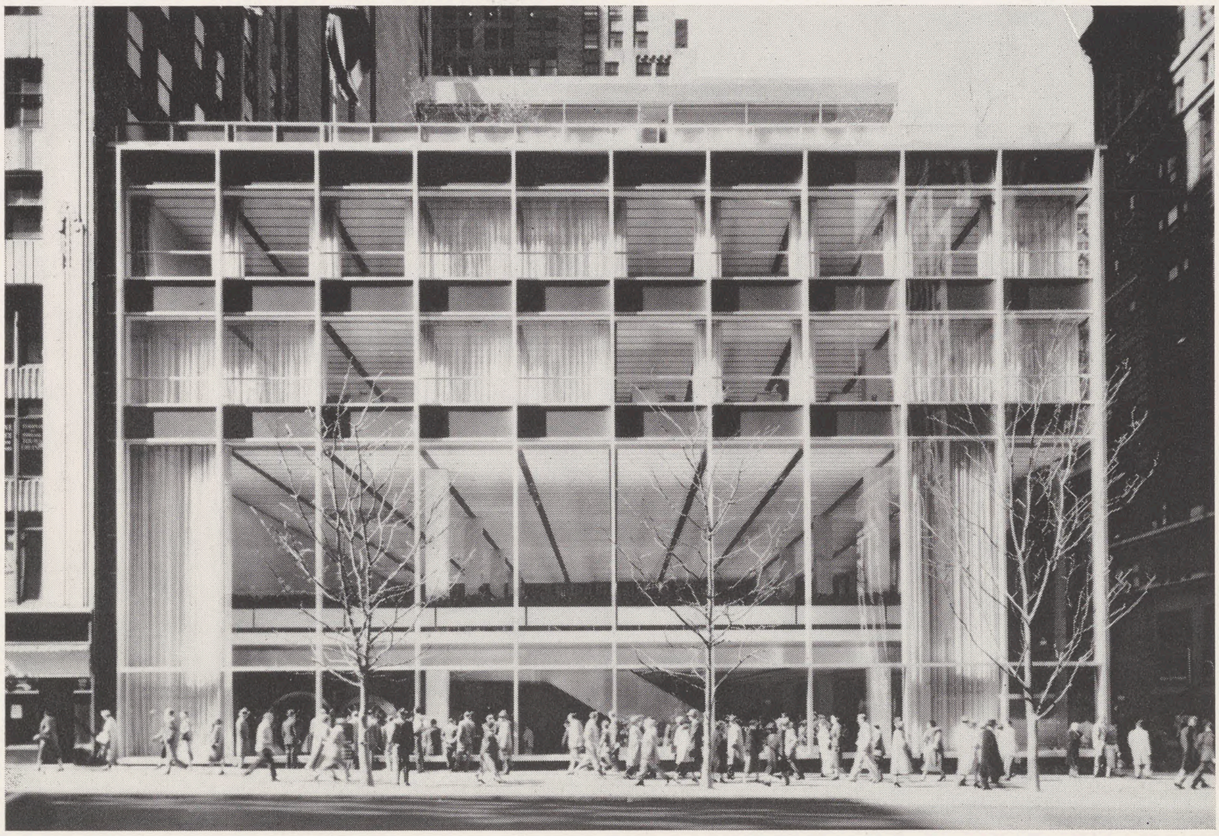
Founded in 1935, Skidmore, Owings & Merrill is an outstanding example of the large firm engaged in "group practice" which has emerged in response to the complex problems of coordinating buildings for big business in the mid-century.

Outstanding for its consistent high quality of design, SOM has taken basic principles laid down by such founding figures of modern architecture as Mies van der Rohe and Le Corbusier, adapted their concepts to the potentialities of U.S. mass production, thus turning out a finished product that in its attention to overall design and detail exemplifies U.S. building at its best.

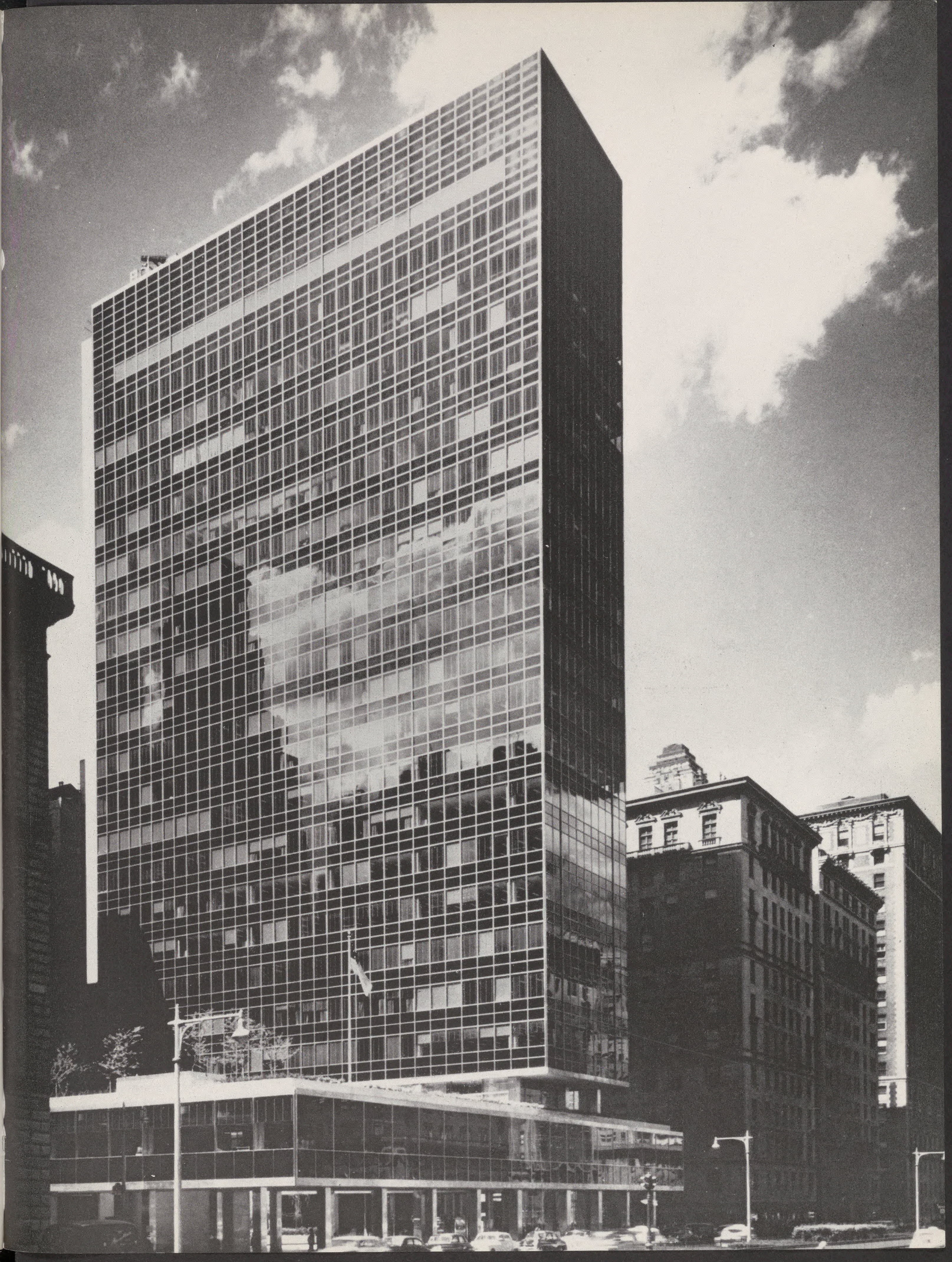
Lever House, 390 Park Avenue, New York (1952), was a trend-setting structure in its use of a taut glass-and-aluminum skin and its precise balance of vertical and horizontal volumes. SOM's highly precisioned Manufacturers Trust Co., Fifth Avenue Branch (1954), with its luminescent ceilings, Connecticut General Life Insurance Co. (1957) building, set in rural surroundings, and the Reynolds Metals Co. (1958) are each responsive to the client's vastly differing demands, at the same time evidencing a consistent, central line of development.

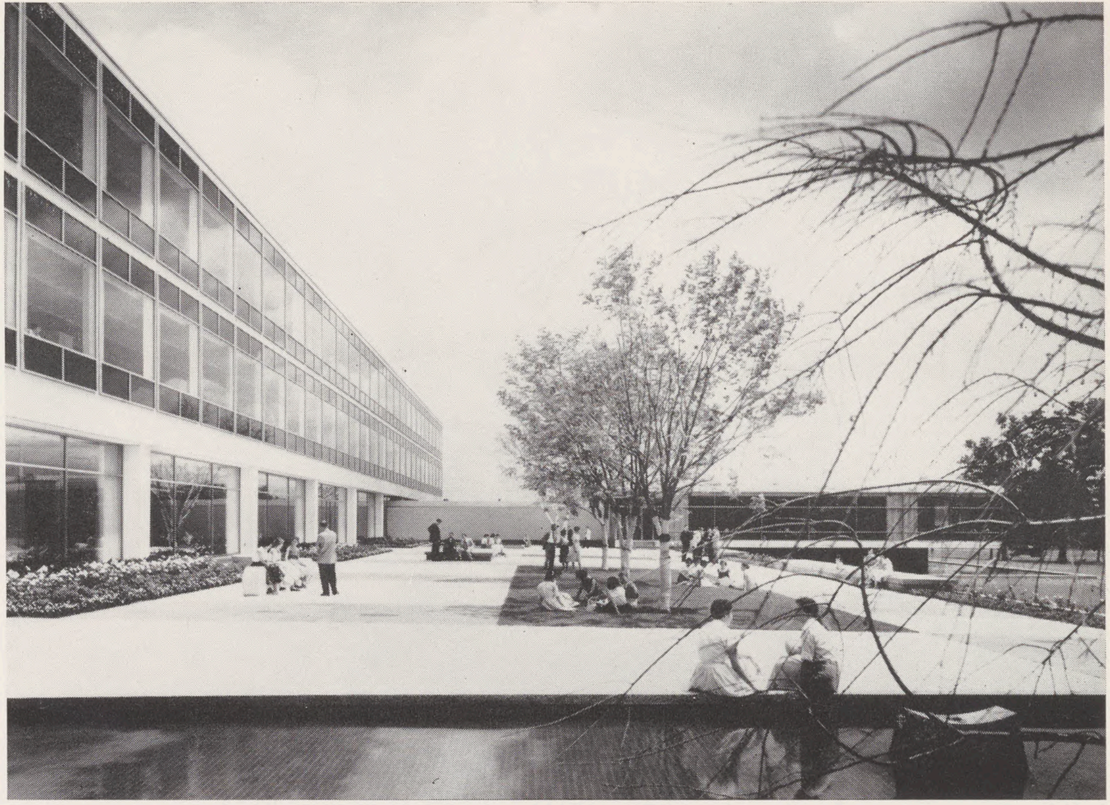
The project proposed for Banque Lambert, Brussels, is an excellent example of a distinguished foreign client seeking out a U.S. architectural firm. In its disciplined use of reinforced concrete, rhythmic cantilevered façade and vast, columnless interior, it is not only sympathetic to Brussels but recalls such architectural landmarks as Venice's Doges Palace.

MANUFACTURERS TRUST CO., Fifth Ave. Branch, New York (1954)



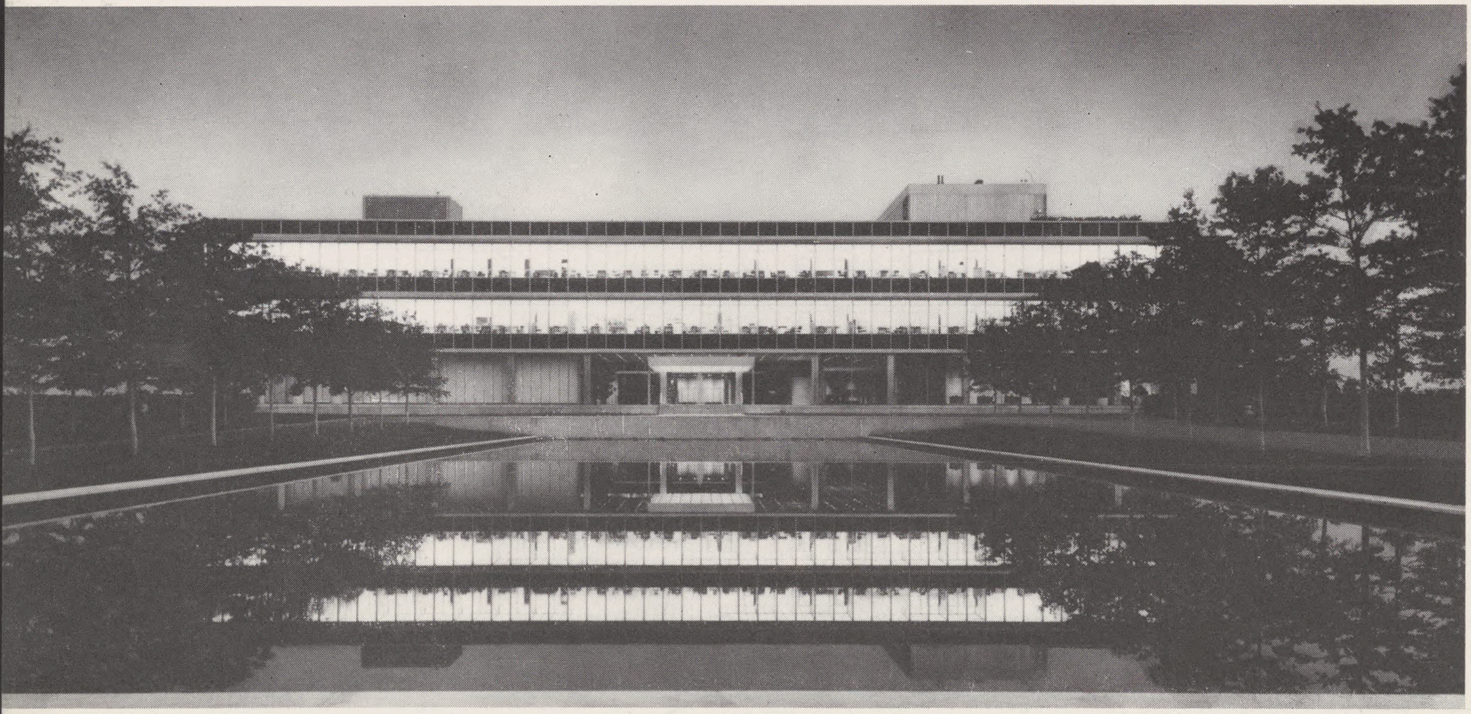
LEVER HOUSE, 390 Park Ave., New York (1952)

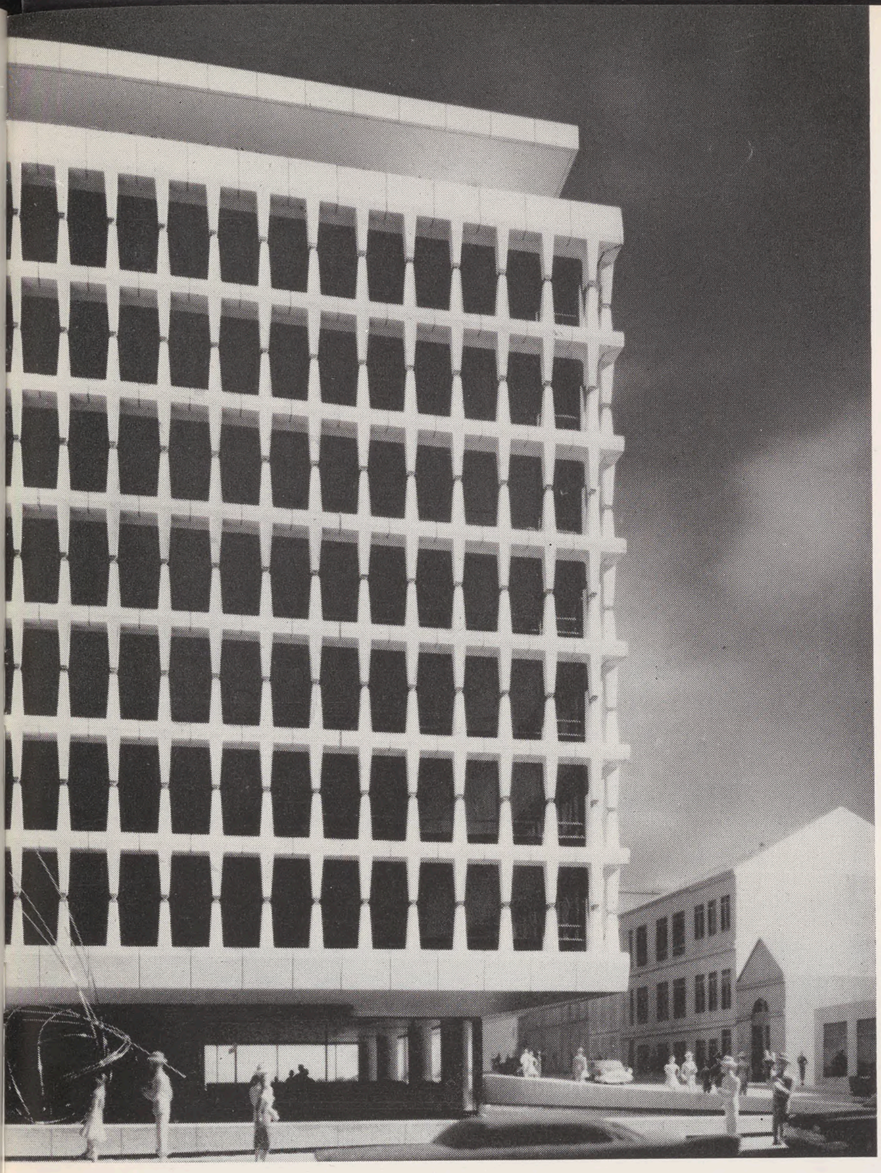




Connecticut General Life Insurance Co., near Hartford, Conn. (1957)

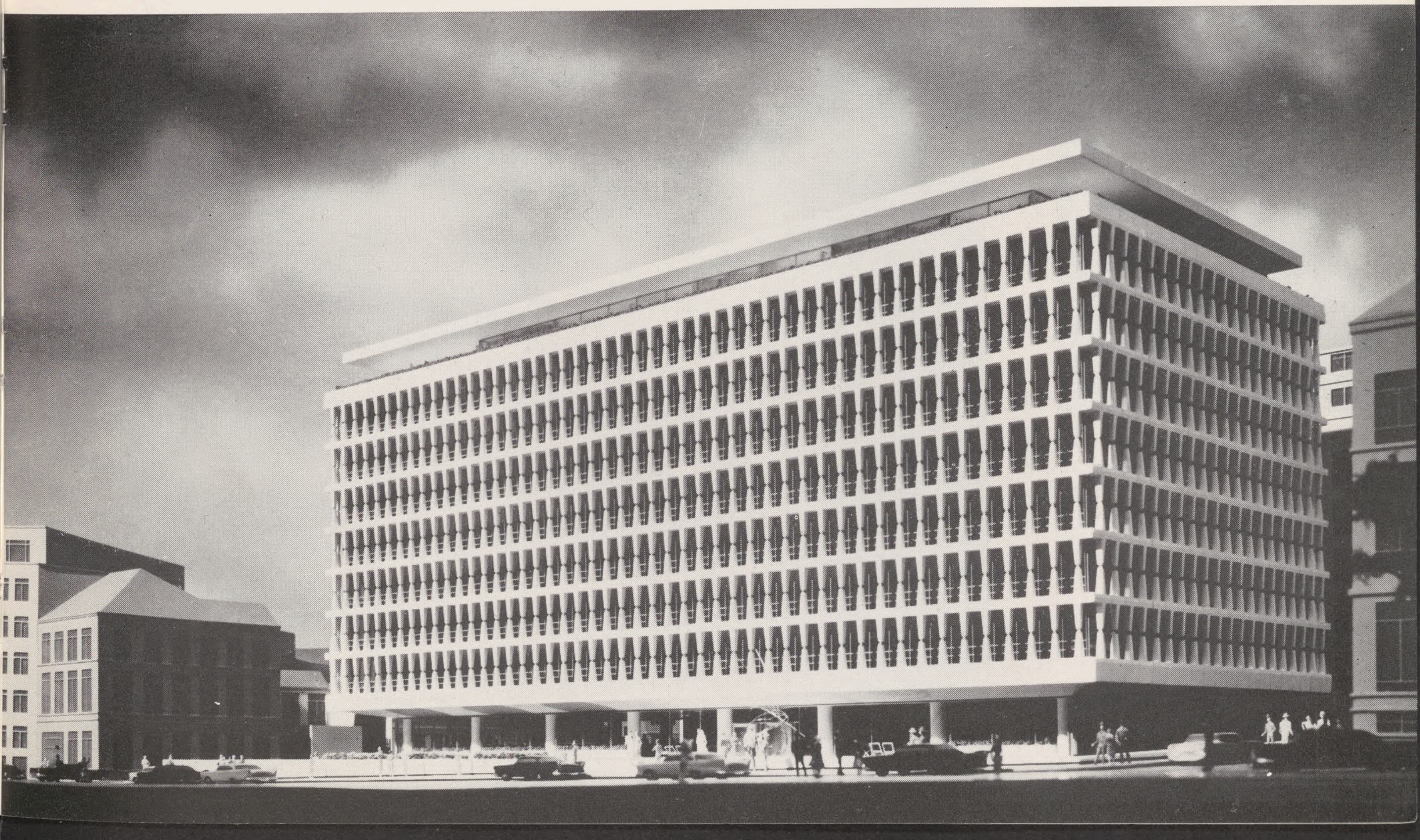
Reynolds Metals Co., Richmond, Va. (1958)





Banque Lambert,
proposed project, Brussels,
detail of model

Banque Lambert,
model of proposed project, Brussels

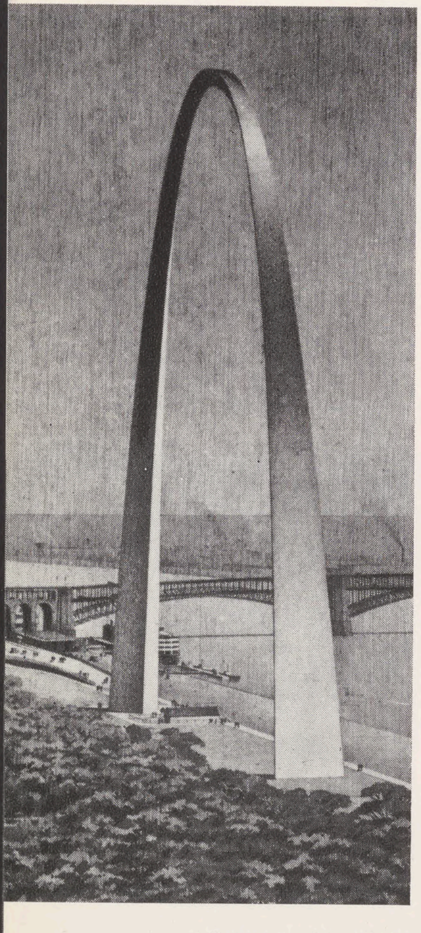


EERO SAARINEN

born Aug. 20, 1910, Kirkkonummi, Finland

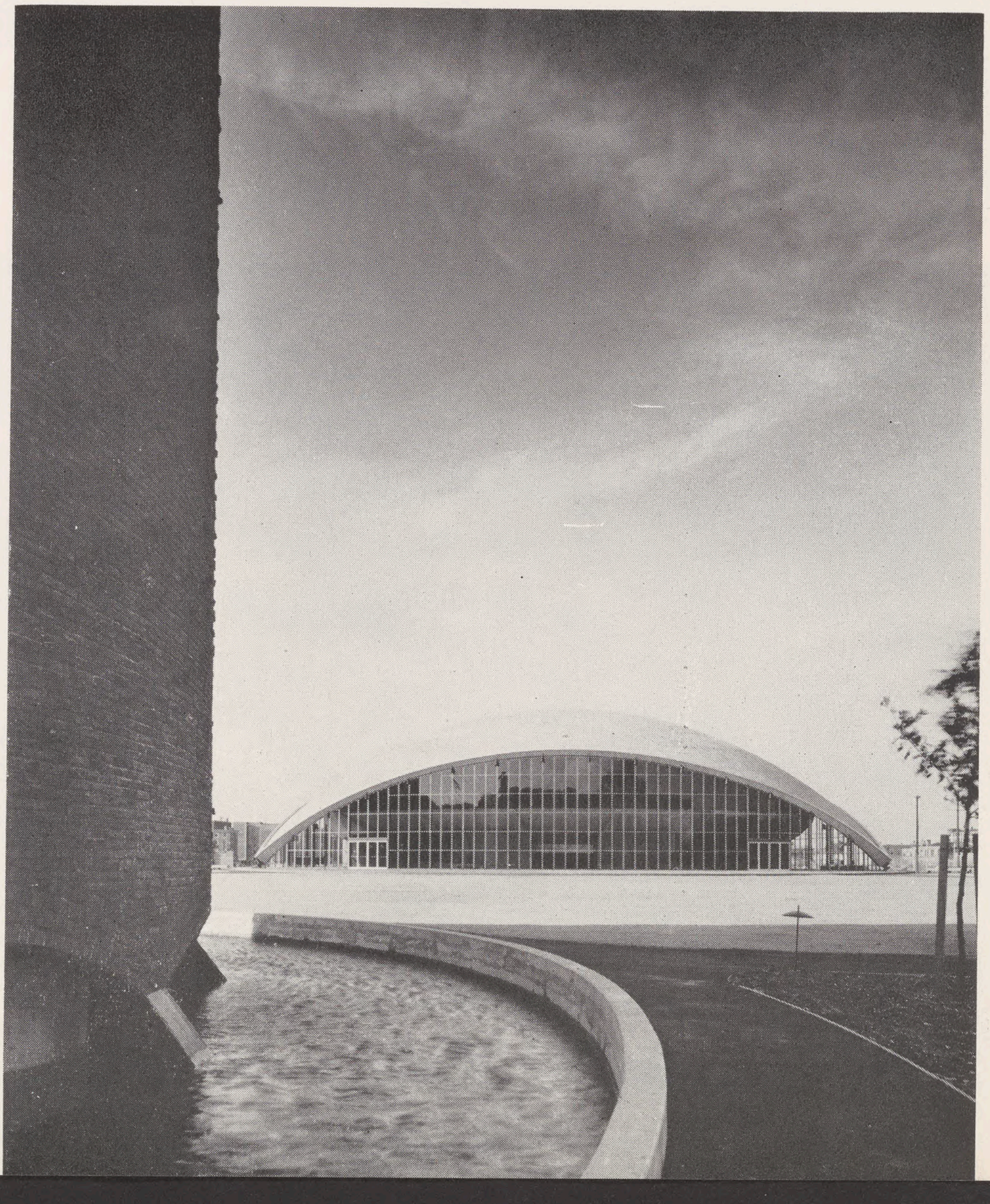
A consistent searcher after significant form, Eero Saarinen, son of Finnish Architect Eliel Saarinen, has brought a broad range of cultural and spatial concepts to bear on architecture. In each building he has chosen a logical solution and dominant idea during the preliminary design discussions, then rigorously carried them through to the smallest detail.

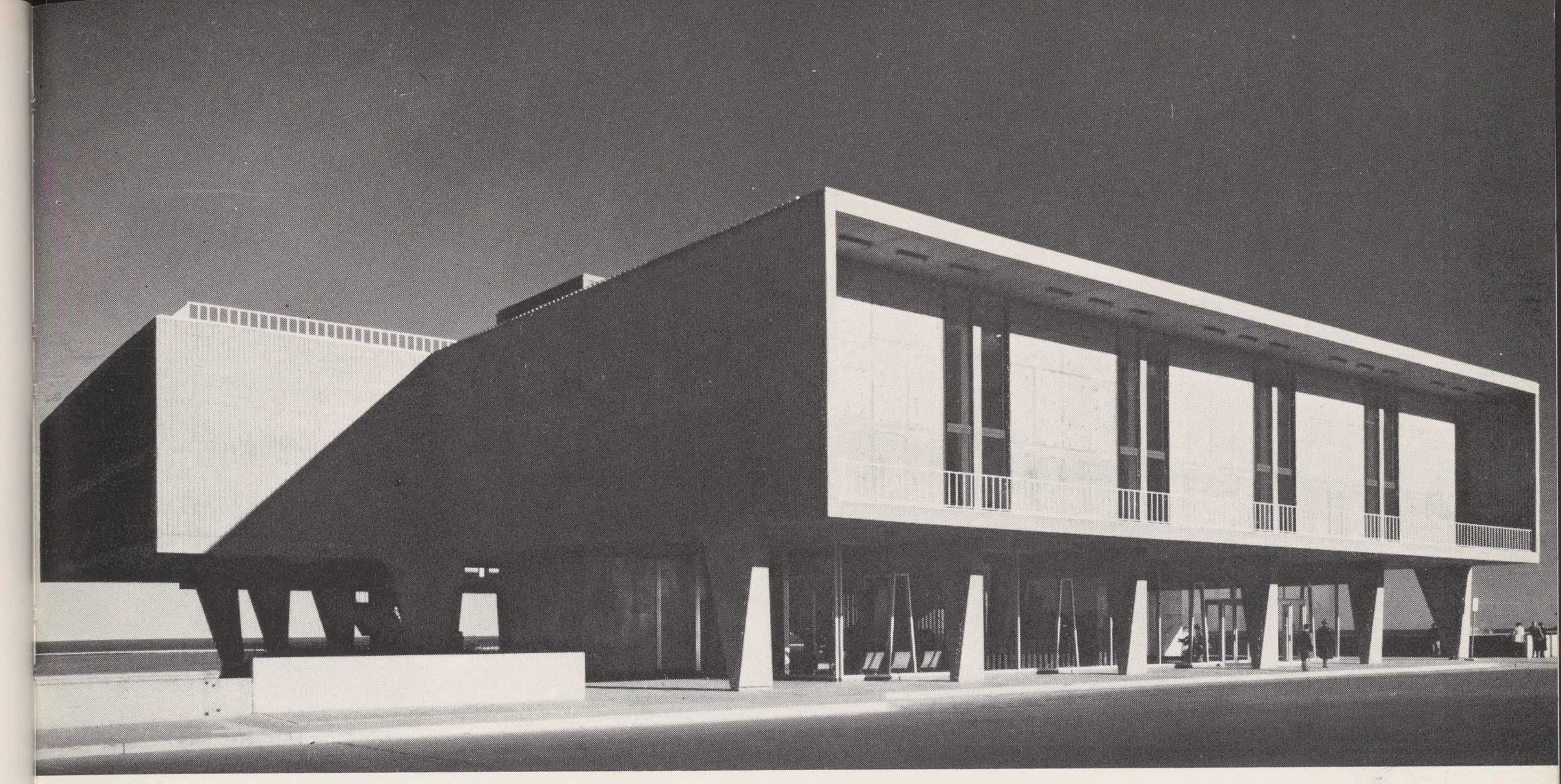
In General Motors Technical Center, Warren, Mich. (1956), Saarinen exploited the strict, modular style of Mies van der Rohe to create a sumptuous campus atmosphere attuned to modern technological research. For the M.I.T. Auditorium (1956) he boldly experimented with a one-eighth of a sphere, then hung the acoustic elements within the concrete shell.



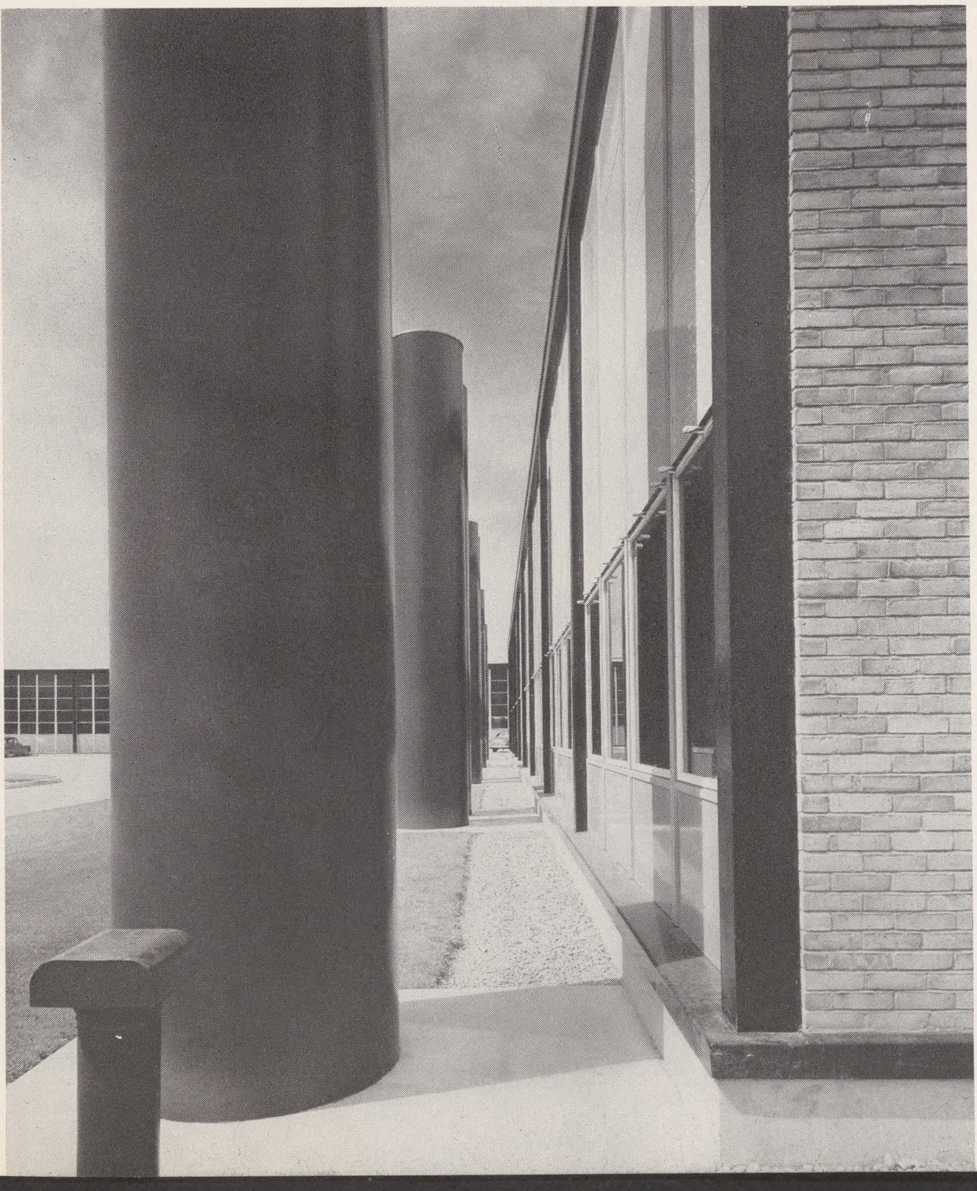
Jefferson National
Expansion Memorial
Competition,
winning drawing
(1948)

Auditorium, Massachusetts Institute of Technology (1956)

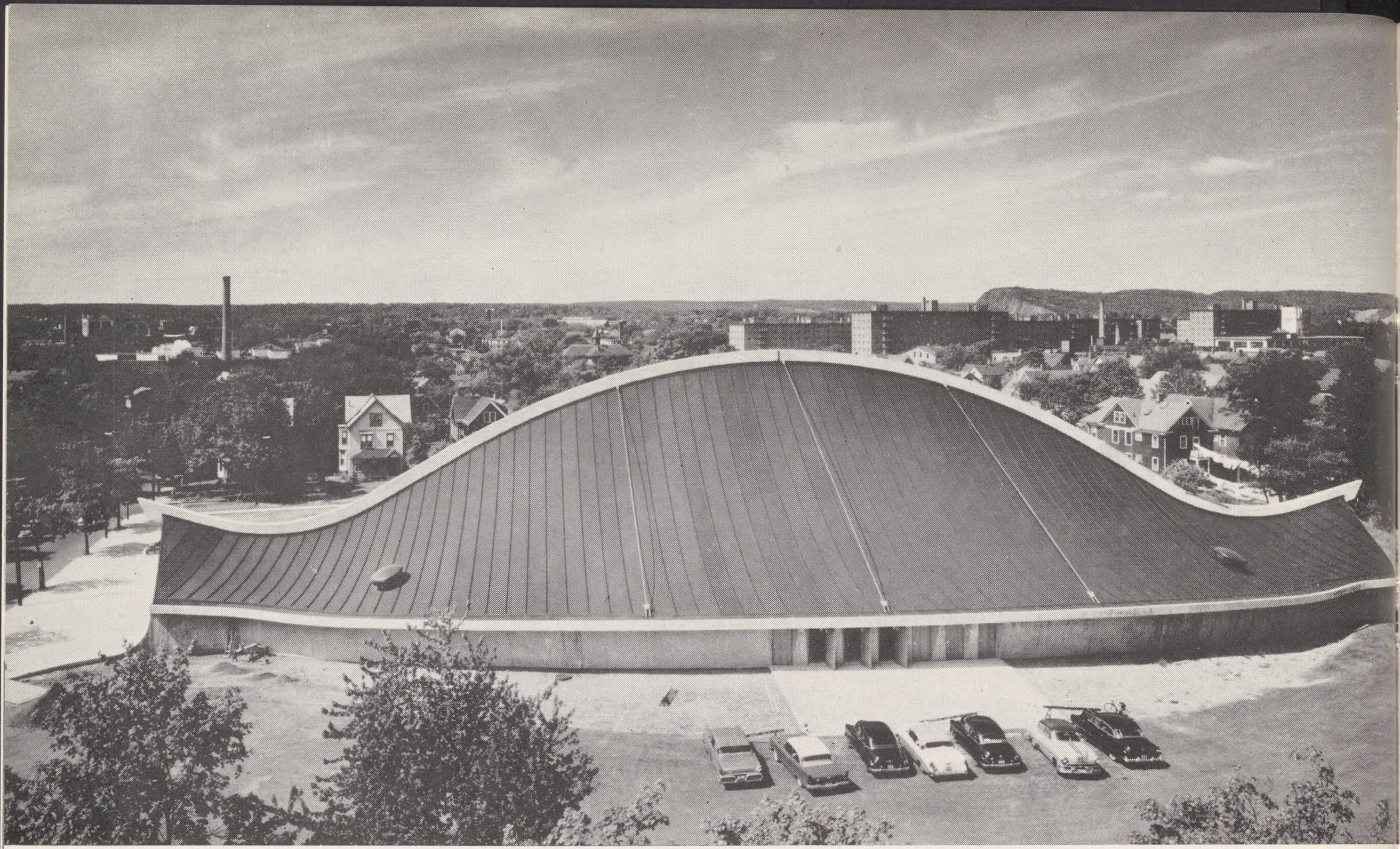




Milwaukee Memorial Center (1957)

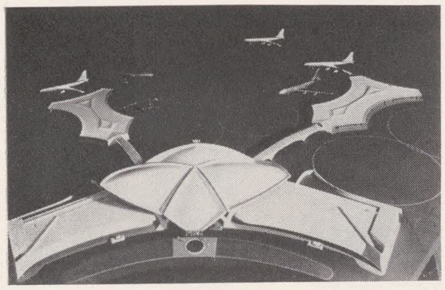


General Motors Technical Center, Warren, Mich. (1956)

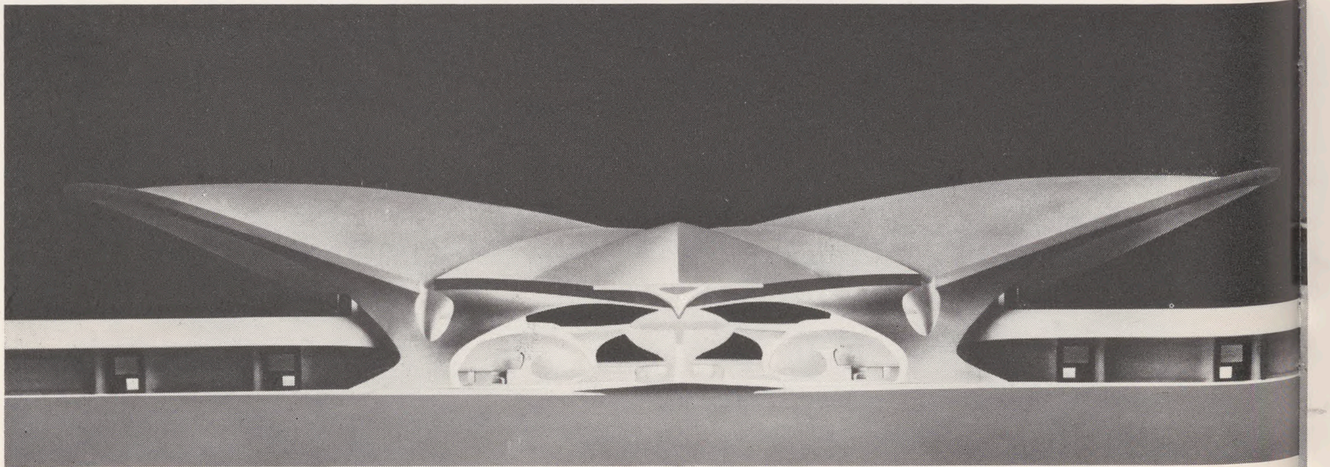


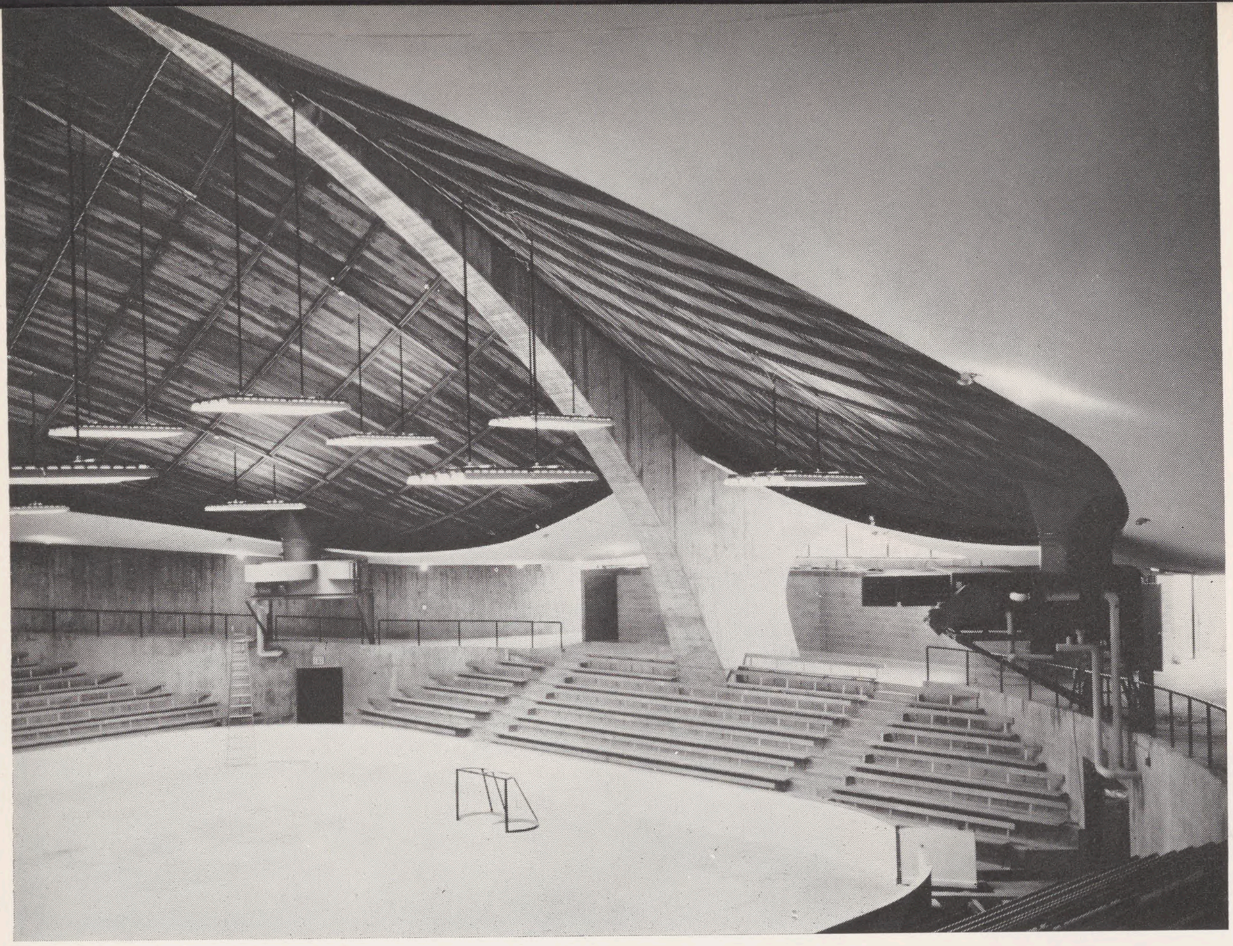
INGALLS RINK, Yale University, exterior

The David S. Ingalls Rink, Yale University (1958), makes the great spinelike arch the dominant theme, with cables suspended in catenary curves carrying the roof to the exterior walls, thus creating a dramatic form evocative of an upturned Viking boat.



The projected T.W.A. Terminal, Idlewild, is an even more daring new form to express a magnificent port of entry for the air age. Its great vaulted wings not only enclose highly sculptural space but also recall in profile the wings of some great bird poised for flight.





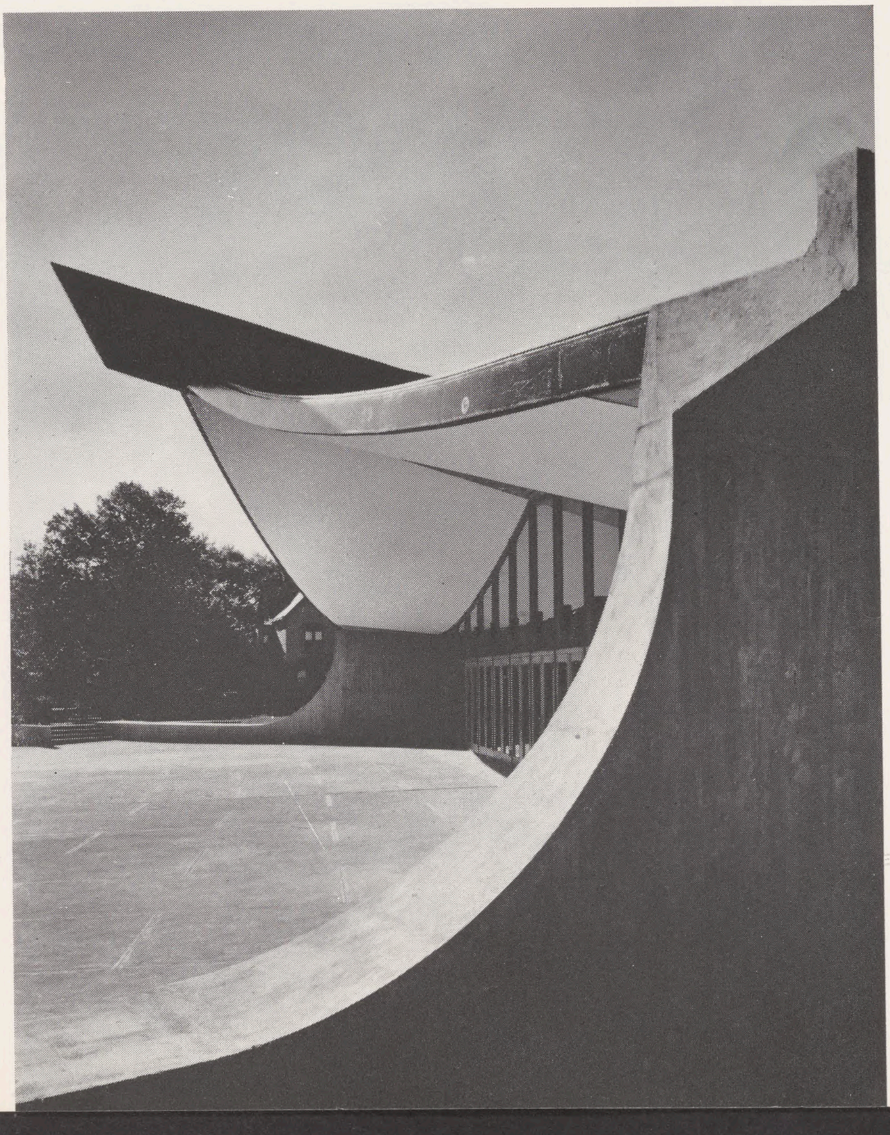
David S. Ingalls Rink, Yale University (1958), interior and entrance

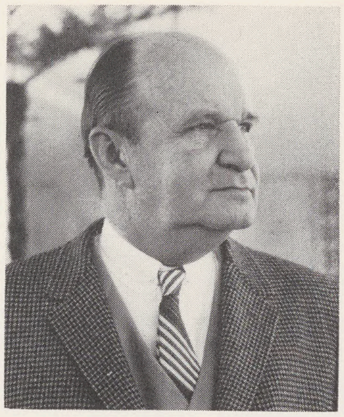
David S. Ingalls Rink,
Yale University (1958)

Architect: Eero Saarinen
& Associates

Associate Architect:
Douglas Orr

Structural Engineers:
Severud-Elstad-
Krueger Associates



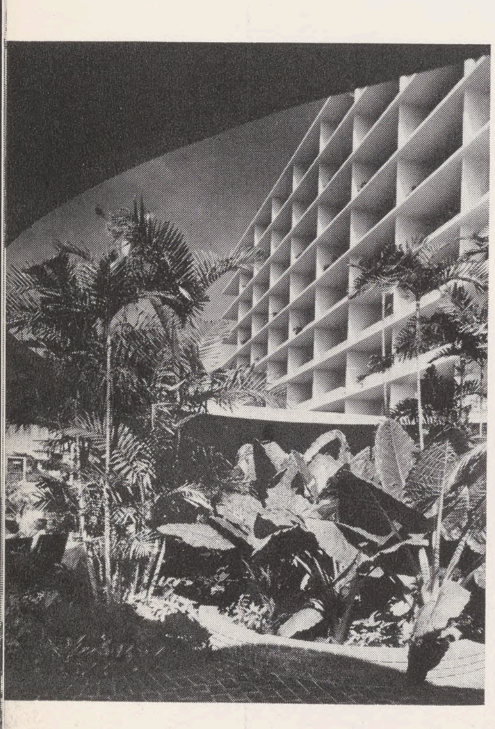


EDWARD DURELL STONE

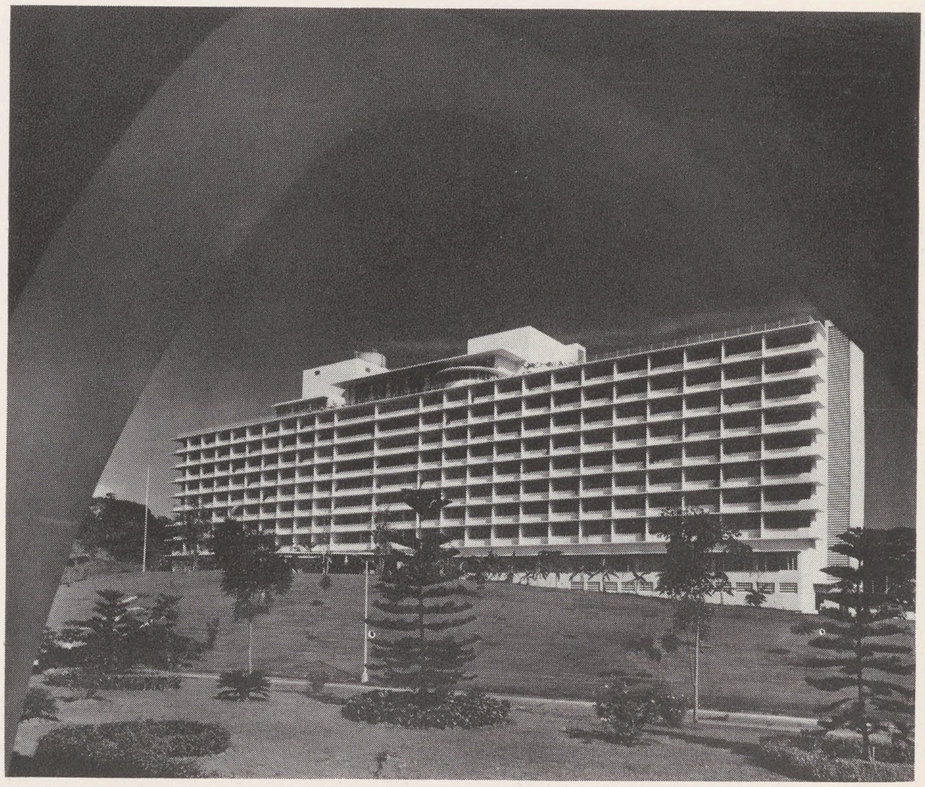
born March 9, 1902, Fayetteville, Arkansas

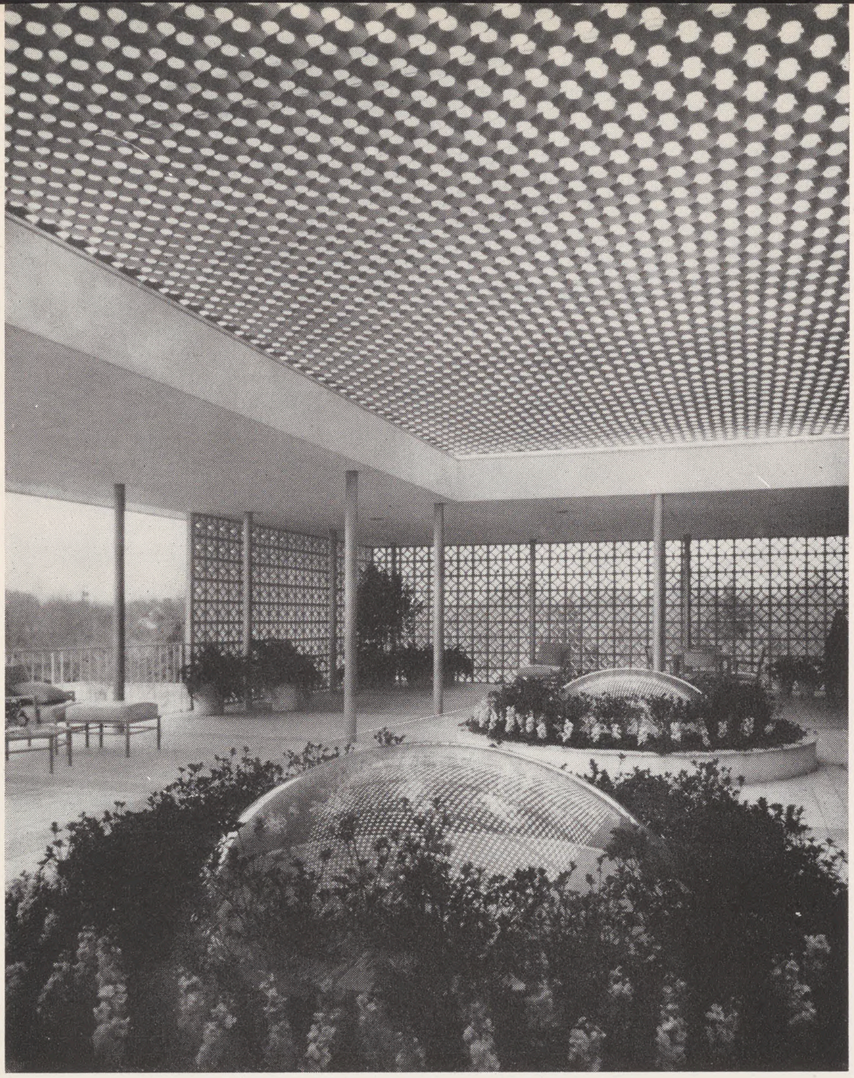
Trained in the architecture schools of Harvard and Massachusetts Institute of Technology, Edward D. Stone steeped himself in classic architecture during his postgraduate tour of Europe, where he also made his firsthand acquaintance with the pioneering works of Europe's leading modern architects. He established a reputation as an outstanding American exponent of the International Style with the Museum of Modern Art (1939), designed in association with the late Philip L. Goodwin, and his house for A. Conger Goodyear, Old Westbury, L. I. With the El Panama Hotel (1951), Stone further proved his versatility by designing the trend-setting prototype of a luxury hotel for the tropics.

As a leading exponent of monumentality and richness in building, Stone in recent years has increasingly designed buildings reminiscent of classic models. The U.S. Pavilion in Brussels (1958) recalls the Colosseum, although with its translucent walls and cable-suspended ceiling it is convincingly modern. The Graf House, Dallas (1958), suggests the Pompeian house focusing inward on its atrium.



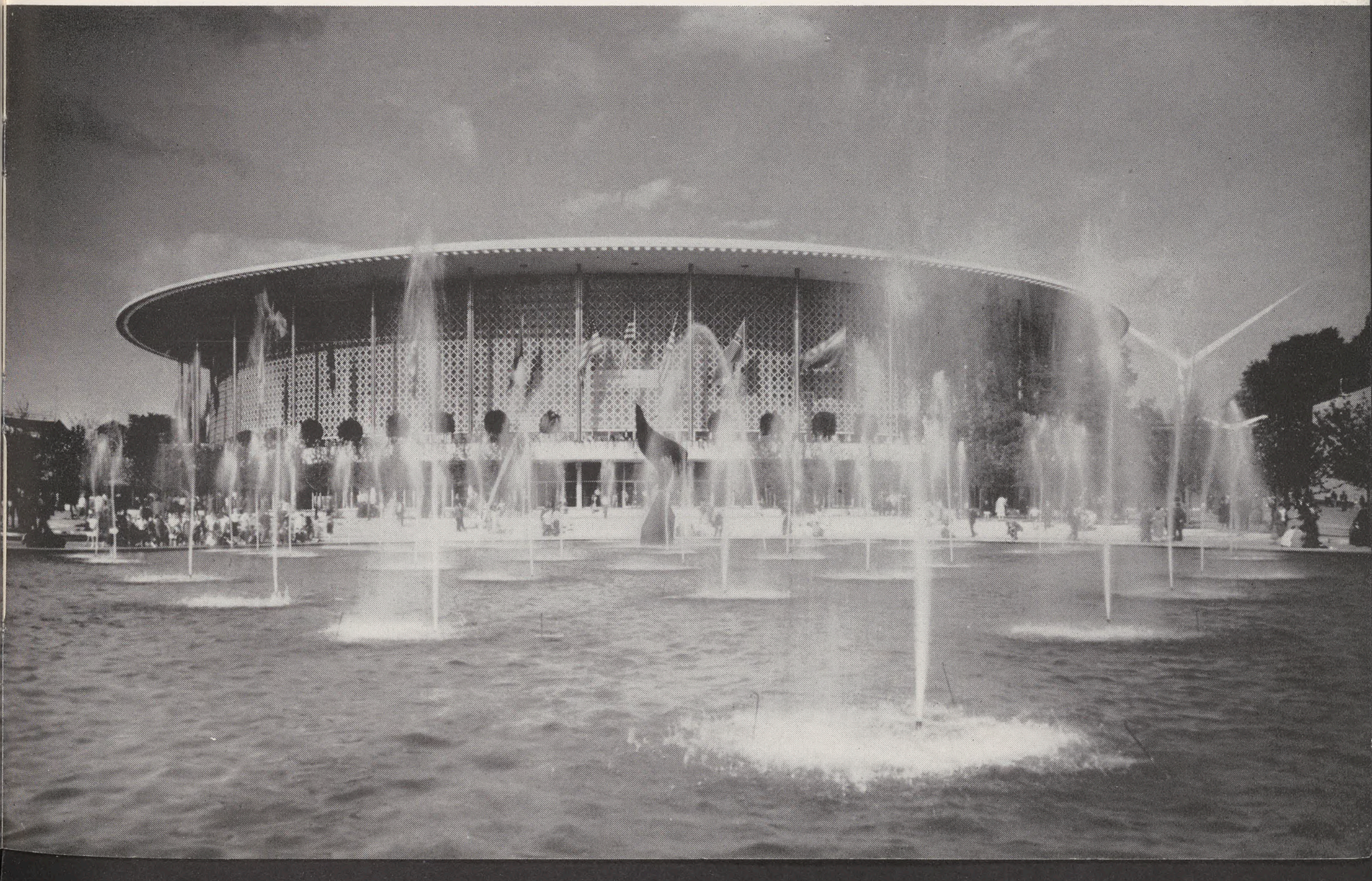
El Panama-Hilton, Panama (1951)

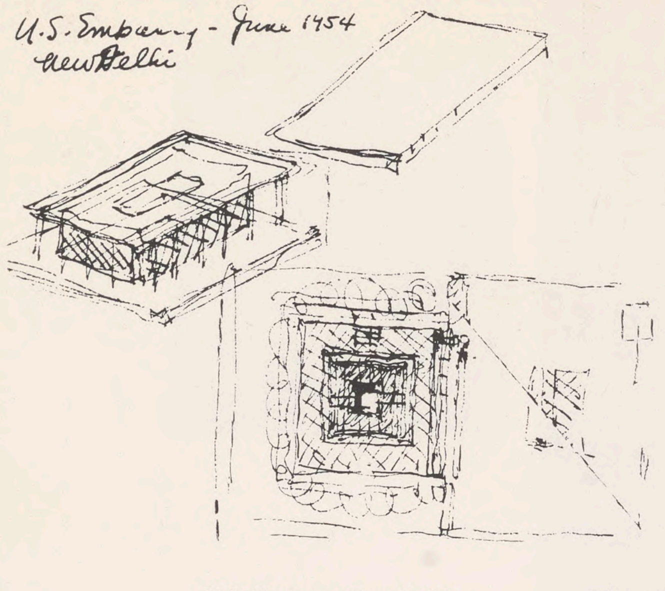




GRAF HOUSE, Dallas, Texas (1958), second floor detail

U.S. PAVILION, World's Fair, Brussels (1958)

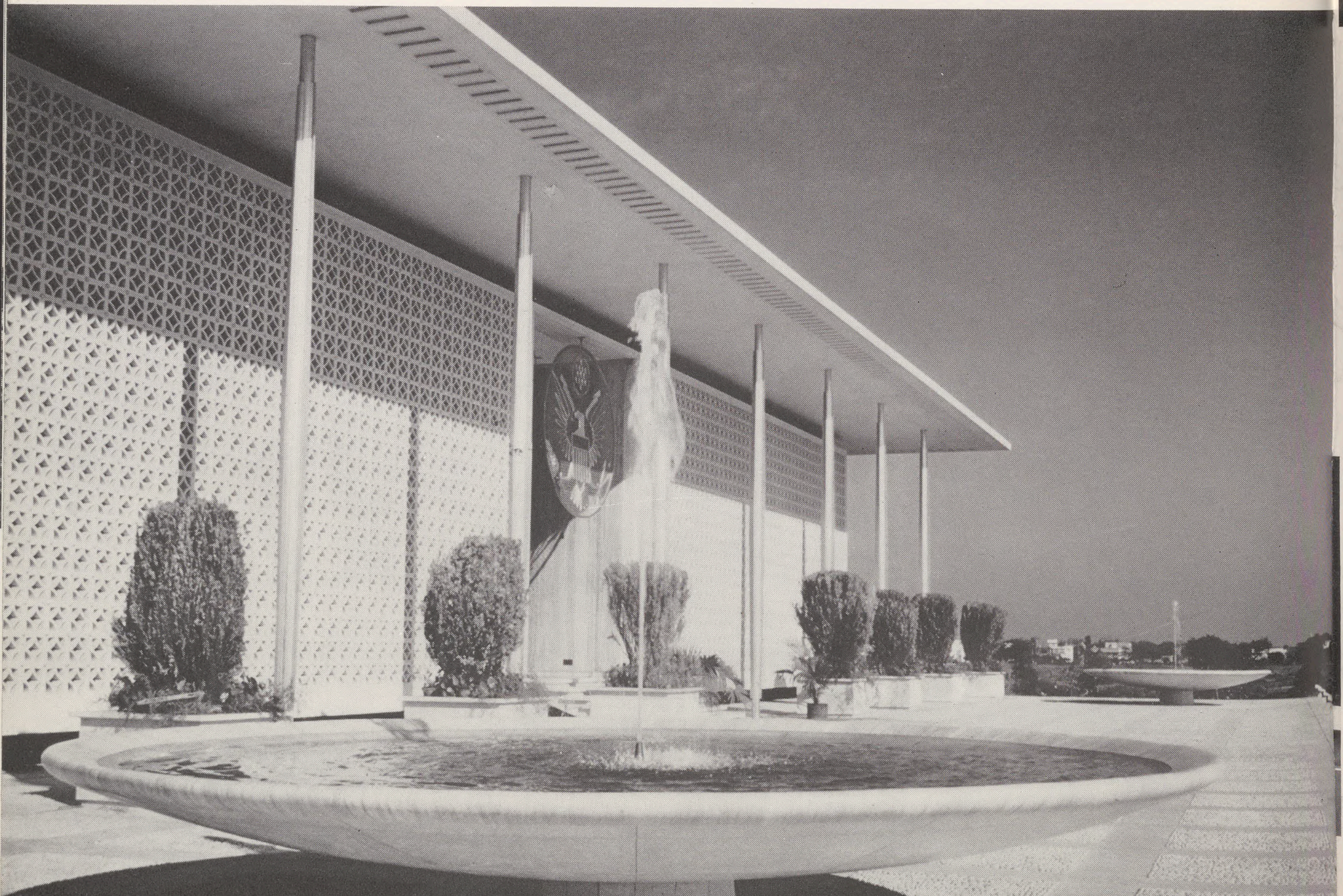


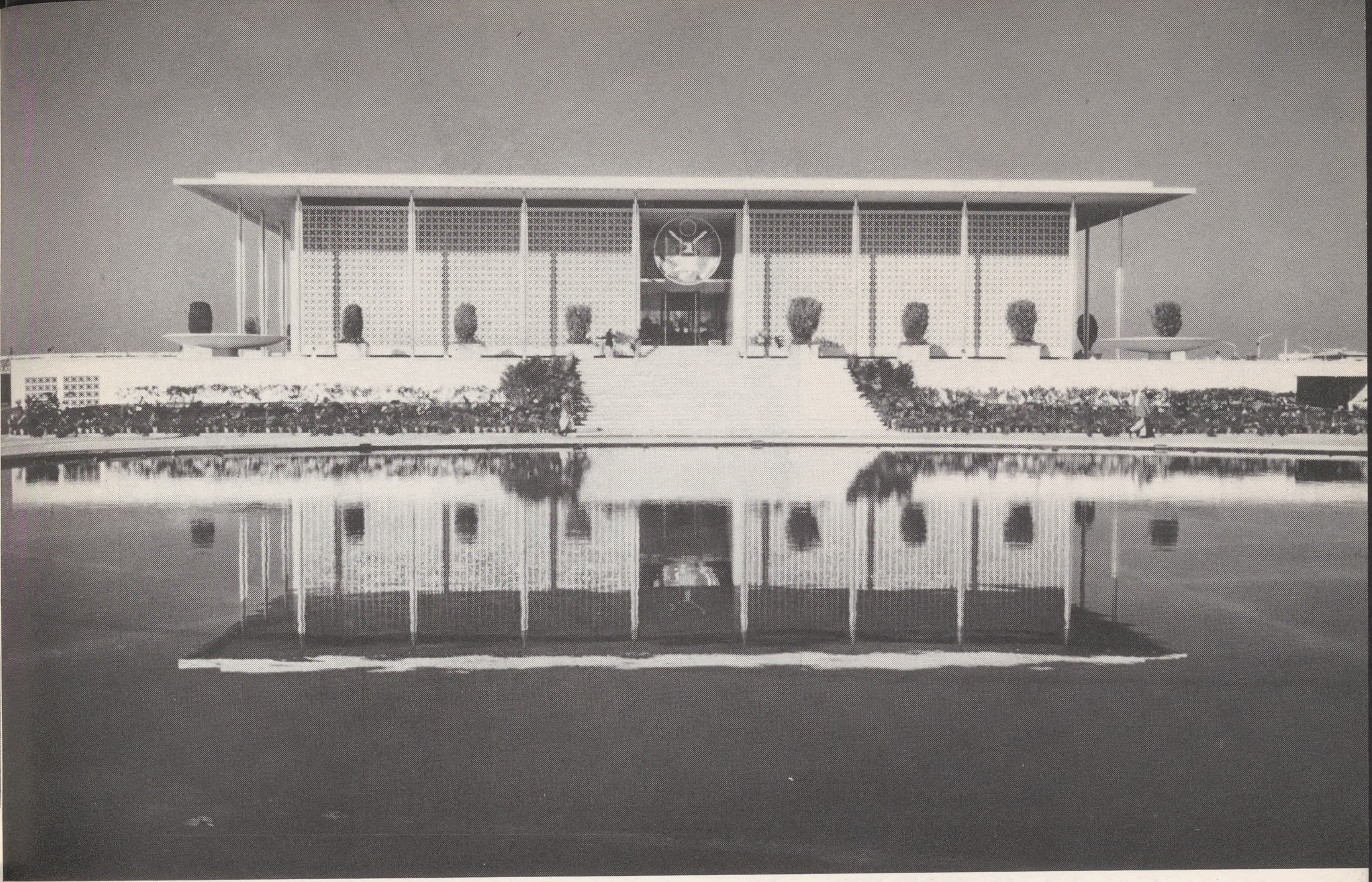


U.S. Embassy, New Delhi,
original sketch (1954)

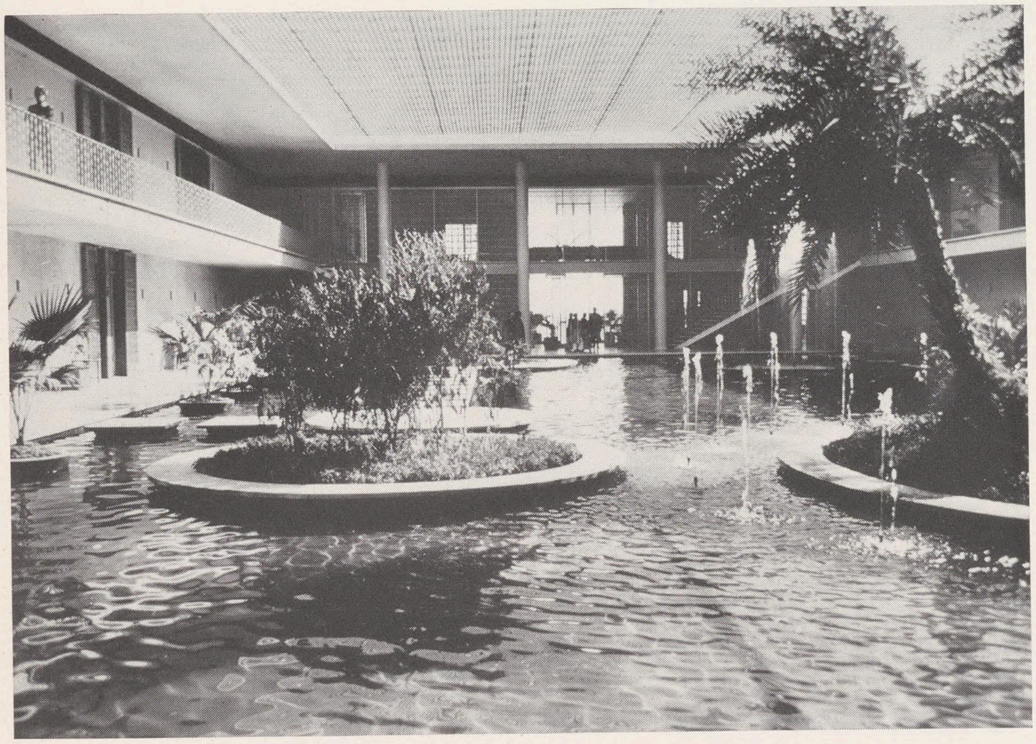
U. S. Embassy, New Delhi (1958)
Architect: Edward Durell Stone

The U.S. Embassy, New Delhi, designed as a salute to Indian culture and U.S. prestige, is clearly Stone's most important work to date. Taking as his point of departure the Greek temple form and its podium, Stone introduced the terrazzo grille as a sunscreen, giving it the importance of a major architectural element. With its integral pattern of ornament, the grille evokes the lacy stone grilles of Hindu temples and the Taj Mahal.





U.S. EMBASSY, New Delhi



U.S. EMBASSY, New Delhi,
interior court

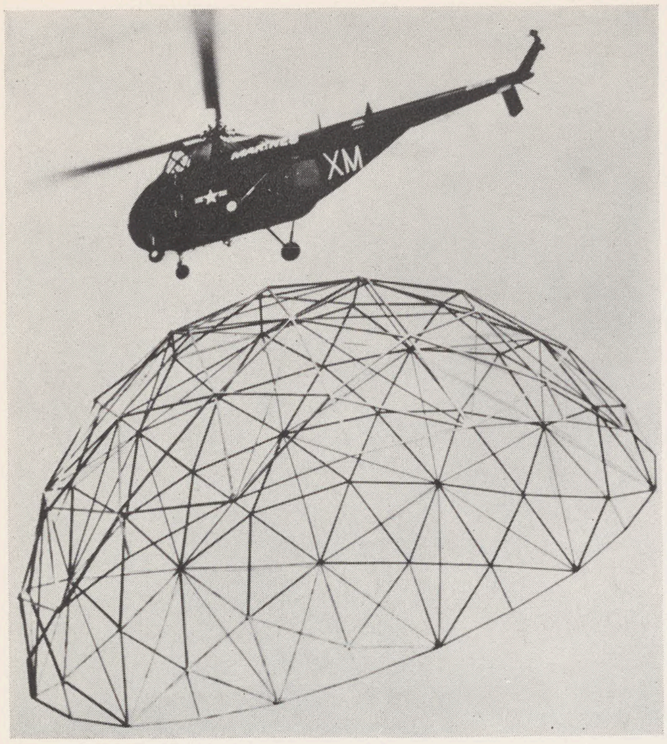
R. BUCKMINSTER FULLER

born July 12, 1895, Milton, Massachusetts

An outstanding example of how new forms can derive from the study of pure engineering and mathematics, R. Buckminster Fuller considers himself primarily "a research laboratory for architecture." Often working well in advance of the technological possibilities of the moment, Fuller has proposed a series of highly original projects (the Dymaxion house suspended from a central mast, a self-contained waterless bathroom). His own system of geometry served as a basis for a new form of map projection.

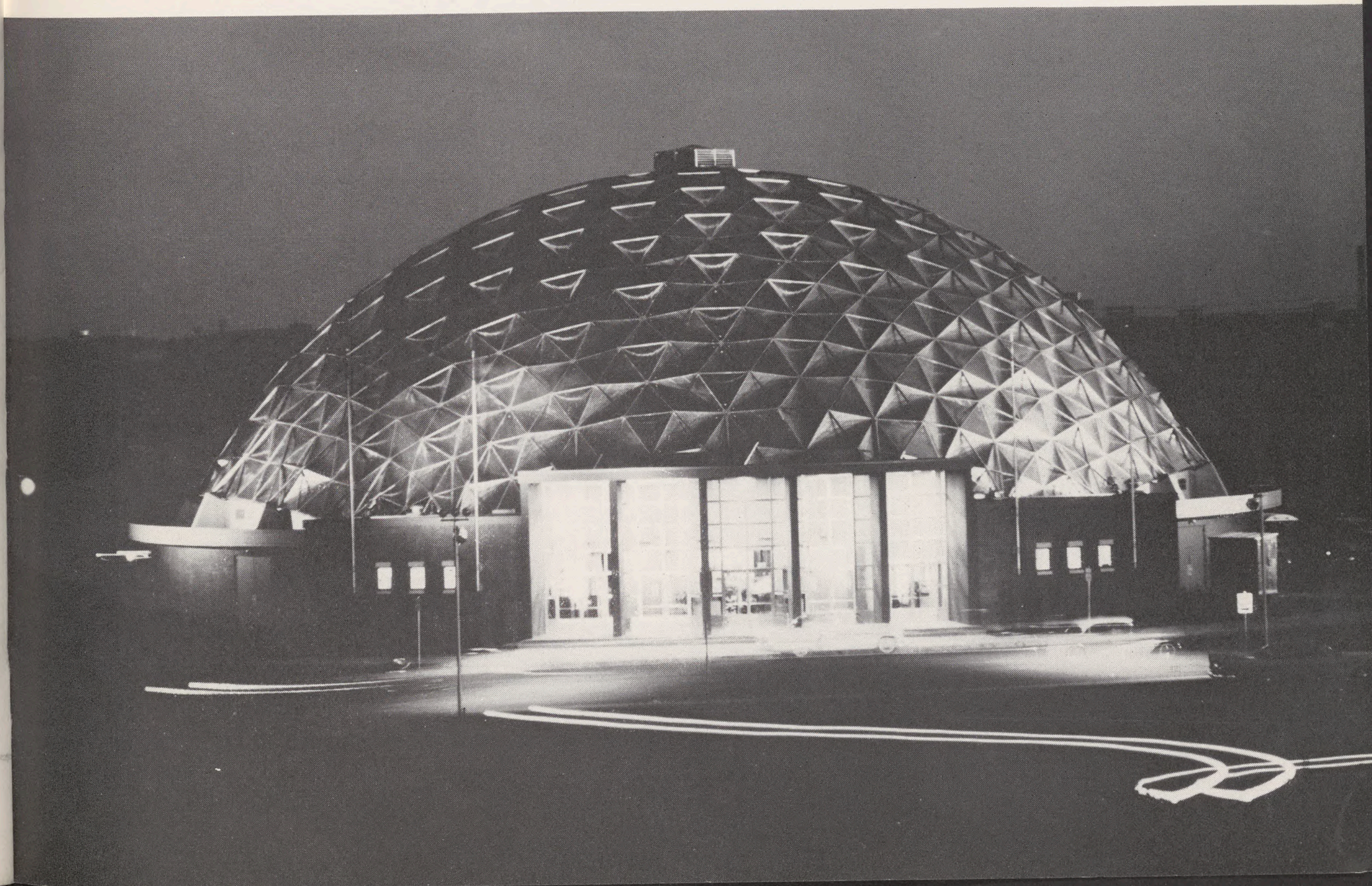
Fuller's geodesic dome, based on a system of tetrahedrons, has been developed into one of the most ingenious and practical solutions for covering vast areas of column-free space. As the 55-ft.-diameter radome, it is now used to shelter radar along the full length of the DEW line; made of aluminum and magnesium, the geodesic dome is in use by the U.S. Marine Corps as an air-transportable advance base hangar.

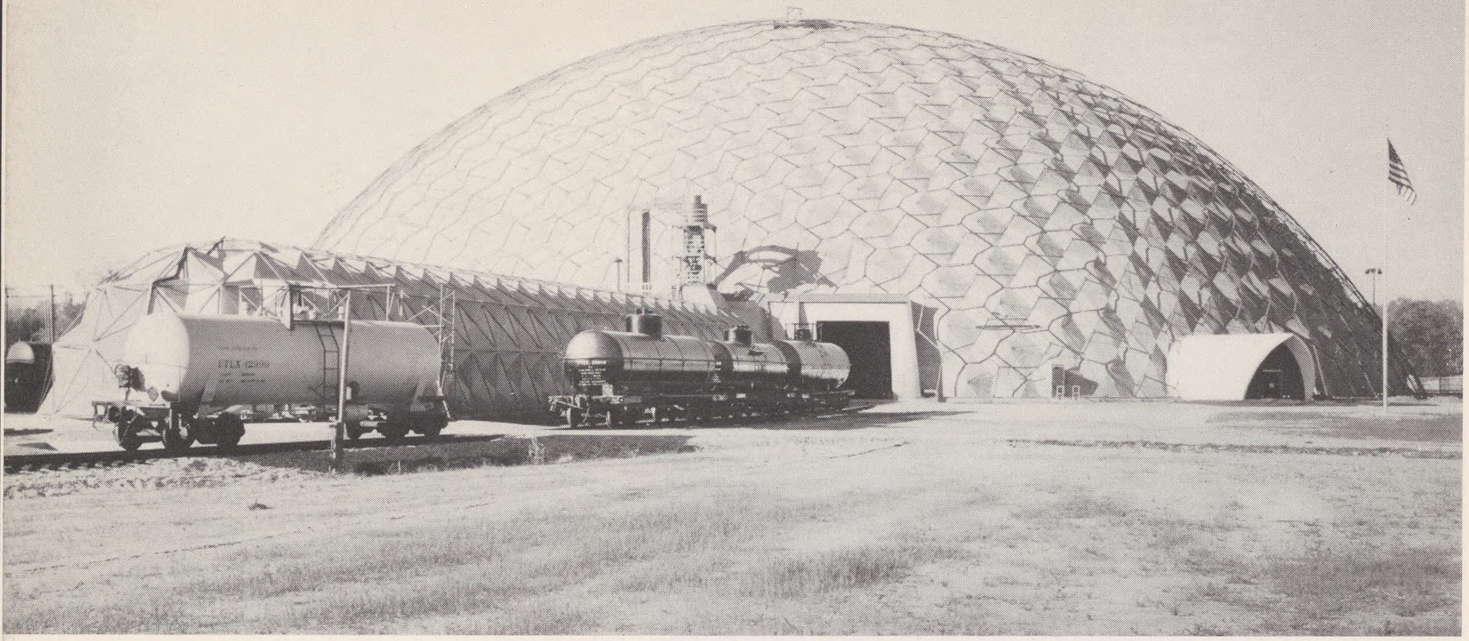
Put into commercial production by Kaiser Aluminum & Chemical Corp., a 145-ft.-diameter aluminum geodesic dome is now in use as a theater, civic center, factory, bank. A smaller version (114 ft. diameter) has been flown round the world to house exhibits for the U.S. State Department. Its most dramatic use to date has been by Union Tank Car Co., where a 384-ft.-diameter dome is in use at Baton Rouge, La., as a geodesic roundhouse for tank cars.



Helicopter lifting U.S. Marine Corps geodesic dome

CASA MANANA THEATER, Fort Worth, Texas (1958), 145-ft.-diameter aluminum geodesic dome





Union Dome (1958), 384 ft. in diameter

Designed by Union Tank Car Co. with Synergetics, Inc.
and M. E. Uyanik, Ezra Mier and Associates

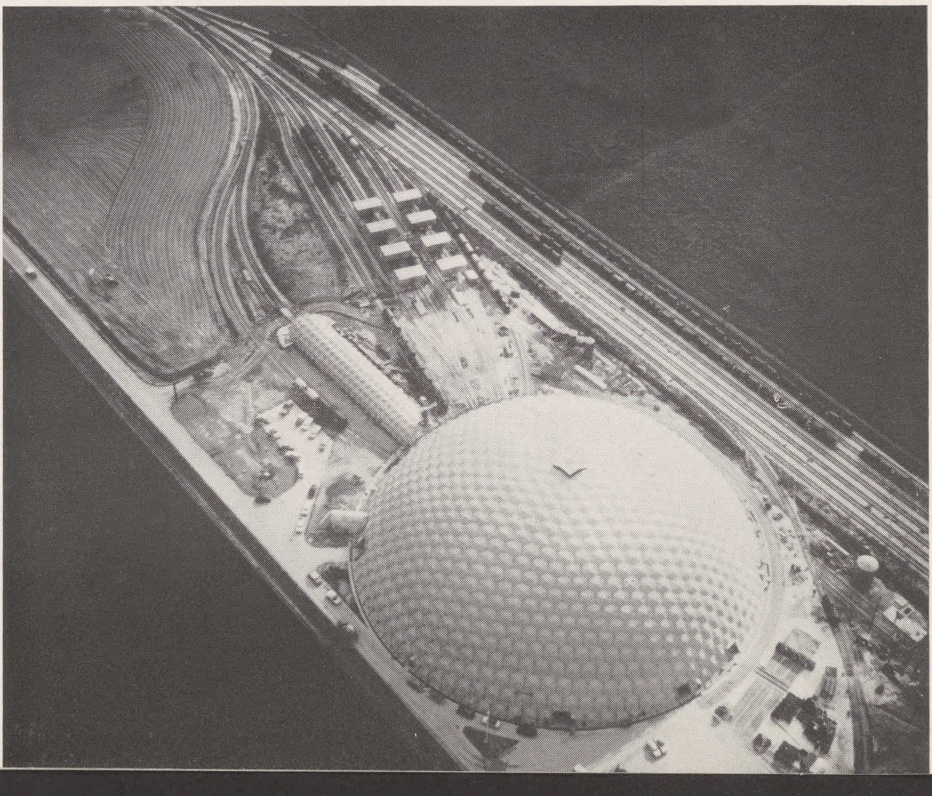
Associate Engineers: Battey & Childs

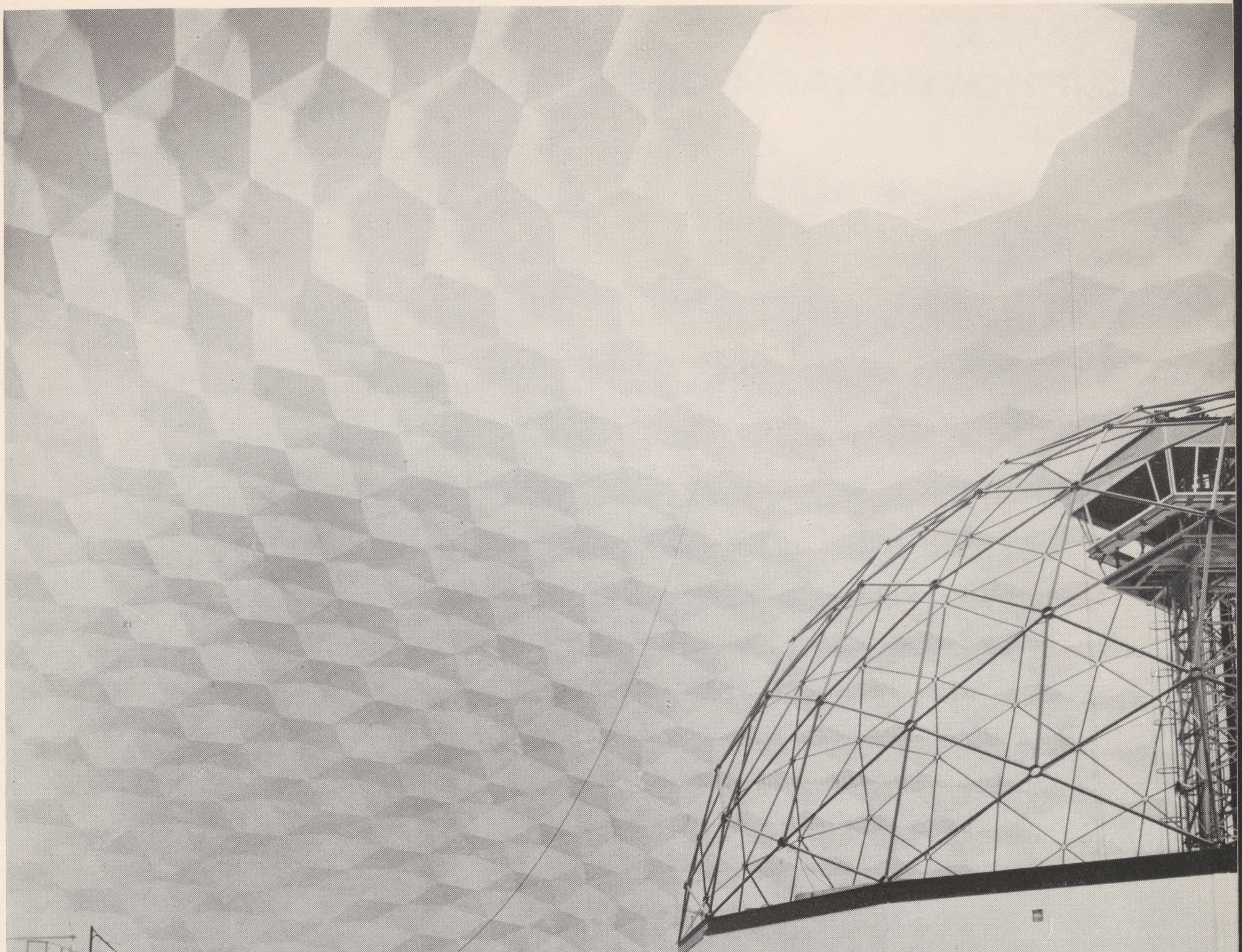
Industrial Designer: George S. Hunt

A space envelope covering 110,000 sq. ft. of tank car repair area, the "Union Dome" rises 120 ft., spans 384 ft., yet was made of only 321 welded panels of 11-gauge 1/8-in. sheet steel. The dome is held in tension by 4-in. steel pipe sections approximately 9 ft. long positioned by 3/4-in. tension rods. An 80-ft. control tower inside the dome directs tank cars to specialized areas for repairs. Costing less than $10 per sq. ft., this dome is the largest circular covered structure ever erected.

A similar "Dome" is being constructed for Union Tank by Graver Tank & Manufacturing Co., Wood River, Ill.

Union Tank Car Co.,
Baton Rouge, La. (1958),
air view





Union Tank Car Co. roundhouse, interior

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